

TRANSLATED PROTEIN - NUCLEOTIDE 65 TO 598

1 AATTCGGTACGAGGCTGGGGTTCAGGCGGGCAGCAGCTGCAGGCT
 46 GACCTTGCAGCTTGGCGGAATGGACTGGCCTCACAACCTGCTGTT
 MetAspTrpProHisAsnLeuLeuPh
 91 TCTTCTTACCATTTCATCTTCCTGGGGCTGGGCAGCCAGGAGCC
 eLeuLeuThrIleSerIlePheLeuGlyLeuGlySerGlnGluPr
 136 CCAAAGCAAGAGGAAGGGGCAAGGGCGGCCTGGGCCCTGGCCTG
 oGlnLysGlnGluGluGlyAlaArgAlaAlaTrpAlaLeuAlaTr
 181 GCCTCACCAGGTGCCACTGGACCTGGTGTACGGATGAAACCGTA
 pProHisGlnValProLeuAspLeuValSerArgMetLysProTy
 226 TGCCCGCATGGAGGAGTATGAGAGGAACATCGAGGAGATGGTGGC
 rAlaArgMetGluGluTyrGluArgAsnIleGluGluMetValAl
 271 CCAGCTGAGGAACAGCTCAGAGCTGGCCCAGAGAAAGTGTGAGGT
 aGlnLeuArgAsnSerSerGluLeuAlaGlnArgLysCysGluVa
 316 CAACTTGCAGCTGTGGATGTCCAACAAGAGGAGCCTGTCTCCCTG
 lAsnLeuGlnLeuTrpMetSerAsnLysArgSerLeuSerProTr
 361 GGGCTACAGCATCAACCACGACCCCAGCCGTATCCCCGTGGACCT
 pGlyTyrSerIleAsnHisAspProSerArgIleProValAspLe
 406 GCCGGAGGCACGGTGCCTGTGTCTGGGCTGTGTGAACCCCTTCAC
 uProGluAlaArgCysLeuCysLeuGlyCysValAsnProPheTh
 451 CATGCAGGAGGACCGCAGCATGGTGAGCGTGCCGGTGTTCAGCCA
 rMetGlnGluAspArgSerMetValSerValProValPheSerGl
 496 GGTTCTGTGCGCCCGCCCTCTGCCCCGCCACCGCCCCGCACAGG
 nValProValArgArgArgLeuCysProProProProArgThrGl
 541 GCCTTGCCGCCAGCGCGCAGTCATGGAGACCATCGCTGTGGGCTG
 yProCysArgGlnArgAlaValMetGluThrIleAlaValGlyCy
 586 CACCTGCATCTTCTGAATCACCTGGCCCAGAAGCCAGGCCAGCAG
 sThrCysIlePhe
 631 CCCGAGACCATCCTCCTTGCACCTTTGTGCCAAGAAAGGCCTATG
 676 AAAAGTAAACACTGACTTTTGAAAGCAAAAAAACCACAGGAAGCT
 721 TCGGCTGGGTTCAGACACATGGAAAACAGACTTCCTGTGCCAGC
 766 GCATGCTGATCCCTTCAGCAGCCGCTTCTCCACCCTTGGGGCTGC
 811 TCTCCAGCACCTGGCAGTGTCCAGAGCGGATAGGGGCGCCGTGTT
 856 TGGTGAATGAGTGCACAGACGCTCTAGGGGGAGCCCAAGATCTG
 901 CCTCCTGCCTCCCTCTATTATGCCTTCATAGGTGGGTGAGAACA
 946 AGAATTCCTTATCAACCTCCCGGGTCCCCCACTGCCAATCACCCA
 991 CCTCCATTCTACCTCTACAGCTGCCCTTATCCCCCAAAGTCCT
 1036 GAAATTTTGTCTGGGTACCTGCTCCAGGAGGCAGAGTTCCCATG
 1081 AAGGGTATTAAACGTCTACTACACTGC

Fig. 1

TRANSLATED PROTEIN - NUCLEOTIDE 92 TO 1123

1 CAAGCTTGAGAGCAACACAATCTATCAGGAAAGAAAGAAAGAAAA
46 AAACCGAACCTGACAAAAAGAAGAAAAAGAAGAAGAAAAAAAT

91 CATGAAAACCATCCAGCCAAAAATGCACAATTCTATCTCTTGGGC
MetLysThrIleGlnProLysMetHisAsnSerIleSerTrpAl

136 AATCTTCACGGGGCTGGCTGCTCTGTGTCTCTTCCAAGGAGTGCC
aIlePheThrGlyLeuAlaAlaLeuCysLeuPheGlnGlyValPr

181 CGTGCGCAGCGGAGATGCCACCTTCCCCAAAGCTATGGACAACGT
oValArgSerGlyAspAlaThrPheProLysAlaMetAspAsnVa

226 GACGGTCCGGCAGGGGGAGAGCGCCACCCTCAGGTGCACTATTGA
lThrValArgGlnGlyGluSerAlaThrLeuArgCysThrIleAs

271 CAACCGGGTCACCCGGGTGGCCTGGCTAAACCGCAGCACCATCCT
pAsnArgValThrArgvalAlaTrpLeuAsnArgSerThrIleLe

316 CTATGCTGGGAATGACAAGTGGTGCCTGGATCCTCGCGTGGTCCT
uTyrAlaGlyAsnAspLysTrpCysLeuAspProArgValValLe

361 TCTGAGCAACACCCAAACGCAGTACAGCATCGAGATCCAGAACGT
uLeuSerAsnThrGlnThrGlnTyrSerIleGluIleGlnAsnVa

406 GGATGTGTATGACGAGGGCCCTTACACCTGCTCGGTGCAGACAGA
lAspValTyrAspGluGlyProTyrThrCysSerValGlnThrAs

451 CAACCACCCAAAGACCTCTAGGGTCCACCTCATTGTGCAAGTATC
pAsnHisProLysThrSerArgValHisLeuIleValGlnValSe

496 TCCCAAAATTGTAGAGATTTCTTCAGATATCTCCATTAATGAAGG
rProLysIleValGluIleSerSerAspIleSerIleAsnGluGl

541 GAACAATATTAGCCTCACCTGCATAGCAACTGGTAGACCAGAGCC
yAsnAsnIleSerLeuThrCysIleAlaThrGlyArgProGluPr

586 TACGGTTACTTGGAGACACATCTCTCCCAAAGCGGTTGGCTTTGT
oThrValThrTrpArgHisIleSerProLysAlaValGlyPheVa

631 GAGTGAAGACGAATACTTGGAAATTCAGGGCATCACCCGGGAGCA
lSerGluAspGluTyrLeuGluIleGlnGlyIleThrArgGluGl

676 GTCAGGGGACTACGAGTGCAGTGCCTCCAATGACGTGGCCGCGCC
nSerGlyAspTyrGluCysSerAlaSerAsnAspValAlaAlaPr

Fig. 2

721 CGTGGTACGGAGAGTAAAGGTCACCGTGAACCTATCCACCATACAT
oValValArgArgValLysValThrValAsnTyrProProTyrI1

766 TTCAGAAGCCAAGGGTACAGGTGTCCCGTGGGACAAAAGGGGAC
eSerGluAlaLysGlyThrGlyValProValGlyGlnLysGlyTh

811 ACTGCAGTGTGAAGCCTCAGCAGTCCCCTCAGCAGAATTCCAGTG
rLeuGlnCysGluAlaSerAlaValProSerAlaGluPheGlnTr

856 GTACAAGGATGACAAAAGACTGATTGAAGGAAAGAAAGGGGTGAA
pTyrLysAspAspLysArgLeuIleGluGlyLysLysGlyValLy

901 AGTGGAAAACAGACCTTTCCTCTCAAACTCATCTTCTTCAATGT
sValGluAsnArgProPheLeuSerLysLeuIlePhePheAsnVa

946 CTCTGAACATGACTATGGGAACCTACACTTGCGTGGCCTCCAACAA
lSerGluHisAspTyrGlyAsnTyrThrCysValAlaSerAsnLy

991 GCTGGGCCACACCAATGCCAGCATCATGCTATTTGGTCCAGGCGC
sLeuGlyHisThrAsnAlaSerIleMetLeuPheGlyProGlyA1

1036 CGTCAGCGAGGTGAGCAACGGCACGTCGAGGAGGGCAGGCTGCGT
aValSerGluValSerAsnGlyThrSerArgArgAlaGlyCysVa

1081 CTGGCTGCCGCCTCTTCTGGTCTTGACCTGCTTCTCAAATTTTG
lTrpLeuProProLeuLeuValLeuHisLeuLeuLeuLysPhe

1126 ATGTGAGTGCCACTTCCCCACCCGGGAAAGGCTGCCGCCACCACC
1171 ACCACCAACACAACAGCAATGGCAACACCGACAGCAACCAATCAG
1216 ATATATACAAATGAAATTAGAAGAAACACAGCCTCATGGGACAGA
1261 AATTTGAGGGAGGGGAACAAAGAATACTTTGGGGGGAAAAGAGTT
1306 TTAAAAAAGAAATTGAAAAATTGCCTTGCGATATTTAGGTACAAT
1351 GGAGTTTCTTTTCCCAAACGGGAAGAACACAGCACACCCGGCTT
1396 GGACCCACTGCAAGCTGCATCGTGCAACCTCTTTGGTGCCAGTGT
1441 GGGCAAGGGCTCAGCCTCTCTGCCACAGAGTGCCCCCACGTGGA
1486 ACATTCTGGAGCTGGCCATCCCAAATTCAATCAGTCCATAGAGAC
1531 GAACAGAATGAGACCTTCCGGCCCAAGCGTGGCGCTGCGGGCACT
1576 TTGGTAGACTGTGCCACCACGGCGTGTG

Fig. 2 (continued)

TRANSLATED PROTEIN - FRAME: 3 - NUCLEOTIDE 501 TO 1532

1
GCCAGGGAATGCCAGGGGAAAGGGATTTCTGATACTCAGAAGA
46
CTCAGAGACTGTCAGTTTAAAAAATGAAAGTAATATAGAAGGGGC
91
AAAGTGGCATTATCATTCTATCTCTCCAGGCTCCTGTCTCTTTA
136
ATCAGCTAGCCTGATTTGCCCAGTAAATGATTCCTGAGAGTGTGT
181
GTGCGTGTGTGTGTGTGTGTGTGCCCCGCGCGTGTGTTGTAGCT
226
CTGTCAATCCTTGGATTAGAACCAATGATTGCAGCTTGTAAGAGG
271
GCTGTCCAGGGCCAGATTGTACAATGTGTCTCAGTGCCAGAGTAT
316
GAGTGGAGATAATTACGGAGAAGTCATACTCTCTCACACCCTCGG
361
CTTTCTTGTGTGTCTTCAGCAAAACAGTGGATTTAAATCTCCT
406
TGCACAAGCTTGAGAGCAACACAATCTATCAGGAAAGAAAGAAAG
451
AAAAAAACCGAACCTGACAAAAAGAAGAAAAAGAAGAAGAAAA
496
AAATCATGAAAACCATCCAGCCAAAAATGCACAATTCTATCTCTT
MetLysThrIleGlnProLysMetHisAsnSerIleSerT
541
GGGCAATCTTCACGGGGCTGGCTGCTCTGTGTCTCTTCCAAGGAG
rpAlaIlePheThrGlyLeuAlaAlaLeuCysLeuPheGlnGlyV
586
TGCCCGTGCGCAGCGGAGATGCCACCTTCCCCAAAGCTATGGACA
alProValArgSerGlyAspAlaThrPheProLysAlaMetAspA
631
ACGTGACGGTCCGGCAGGGGAGAGCGCCACCCTCAGGTGCACTA
snValThrValArgGlnGlyGluSerAlaThrLeuArgCysThrI
676
TTGACAACCGGGTCACCCGGGTGGCCTGGCTAAACCGCAGCACCA
leAspAsnArgvalThrArgvalAlaTrpLeuAsnArgSerThrI
721
TCCTCTATGCTGGGAATGACAAGTGGTGCCTGGATCCTCGCGTGG
leLeuTyrAlaGlyAsnAspLysTrpCysLeuAspProArgValV
766
TCCTTCTGAGCAACACCCAAACGCAGTACAGCATCGAGATCCAGA
alLeuLeuSerAsnThrGlnThrGlnTyrSerIleGluIleGlnA
811
ACGTGGATGTGTATGACGAGGGCCCTTACACCTGCTCGGTGCAGA
snValAspValTyrAspGluGlyProTyrThrCysSerValGlnT
856
CAGACAACCACCCAAAGACCTCTAGGGTCCACCTCATTTGTGCAAG
hrAspAsnHisProLysThrSerArgValHisLeuIleValGlnV

Fig. 3

901 TATCTCCCAAAATTGTAGAGATTTCTTCAGATATCTCCATTAATG
 alSerProLysIleValGluIleSerSerAspIleSerIleAsnG
 946 AAGGGAACAATATTAGCCTCACCTGCATAGCAACTGGTAGACCAG
 luGlyAsnAsnIleSerLeuThrCysIleAlaThrGlyArgProG
 991 AGCCTACGGTTACTTGGAGACACATCTCTCCCAAAGCGGTGGCT
 luProThrValThrTrpArgHisIleSerProLysAlaValGlyP
 1036 TTGTGAGTGAAGACGAATACTTGGAAATTCAGGGCATCACCCGGG
 heValSerGluAspGluTyrLeuGluIleGlnGlyIleThrArgG
 1081 AGCAGTCAGGGGACTACGAGTGCAGTGCCTCCAATGACGTGGCCG
 luGlnSerGlyAspTyrGluCysSerAlaSerAsnAspValAlaA
 1126 CGCCCGTGGTACGGAGAGTAAAGGTCACCGTGAACATATCCACCAT
 laProValValArgArgvalLysValThrValAsnTyrProProT
 1171 ACATTTTCAGAAGCCAAGGGTACAGGTGTCCCGTGGGACAAAAGG
 yrIleSerGluAlaLysGlyThrGlyValProValGlyGlnLysG
 1216 GGACACTGCAGTGTGAAGCCTCAGCAGTCCCCTCAGCAGAATTCC
 lyThrLeuGlnCysGluAlaSerAlaValProSerAlaGluPheG
 1261 AGTGGTACAAGGATGACAAAAGACTGATTGAAGGAAAGAAAGGGG
 lnTrpTyrLysAspAspLysArgLeuIleGluGlyLysLysGlyV
 1306 TGAAAGTGGAACACAGACCTTTCCTCTCAAACTCATCTTCTTCA
 alLysValGluAsnArgProPheLeuSerLysLeuIlePhePheA
 1351 ATGTCTCTGAACATGACTATGGGAACTACACTTGCGTGGCCTCCA
 snValSerGluHisAspTyrGlyAsnTyrThrCysValAlaSerA
 1396 ACAAGCTGGGCCACACCAATGCCAGCATCATGCTATTTGGTCCAG
 snLysLeuGlyHisThrAsnAlaSerIleMetLeuPheGlyProG
 1441 GCGCCGTCAGCGAGGTGAGCAACGGCACGTCGAGGAGGGCAGGCT
 lyAlaValSerGluValSerAsnGlyThrSerArgArgAlaGlyC
 1486 GCGTCTGGCTGCCGCCTCTTCTGGTCTTGACCTGCTTCTCAAAT
 ysValTrpLeuProProLeuLeuValLeuHisLeuLeuLysP
 1531 TTTGATGTGAGTGCCACTTCCCCACCCGGGAAAGGCTGCCGCCAC
 he

Fig. 3 (continued)

1576 CACCACCACCAACACAACAGCAATGGCAACACCGACAGCAACCAA
1621 TCAGATATATACAAATGAAATTAGAAGAAACACAGCCTCATGGGA
1666 CAGAAATTTGAGGGAGGGGAACAAAGAATACTTTGGGGGGAAAAG
1711 AGTTTTAAAAAAGAAATTGAAAATTGCCTTGCAGATATTTAGGTA
1756 CAATGGAGTTTTCTTTTCCCAAACGGGAAGAACACAGCACACCCG
1801 GCTTGGACCCACTGCAAGCTGCATCGTGCAACCTCTTTGGTGCCA
1846 GTGTGGGCAAGGGCTCAGCCTCTCTGCCCACAGAGTGCCCCCAGC
1891 TGGAACATTCTGGAGCTGGCCATCCCAAATTCAATCAGTCCATAG
1936 AGACGAACAGAATGAGACCTTCCGGCCCAAGCGTGGCGCTGCGGG
1981 CACTTTGGTAGACTGTGCCACCACGGCGTGTG

Fig. 3 (continued)

TRANSLATED PROTEIN - NUCLEOTIDE 529 TO 1026

1 GCTCTTCCTGAAGGAAGATCCAGTGGCATATCTCCATGGCTGCCA
 46 GACAGAGTAGAGAAATGGAAC TTATCGGTGTCTCTTCAGAAGTTT
 91 TGTTACAAATATCCAGAAATATTTCTATAATCTAATCAGCAGATT
 136 ATGAATATATGCATTAGACTTTAGTTTTGGTGCAATCACATGAAT
 181 TCCATTTTGTGGAGTAAGAGGTGACTGGGGTATAGGGTACAACCC
 226 ATAGCCATCCATGTTTCATCTTTGTTTTGAATATAATTGGCTAGAA
 271 GATATACATATATCTATGTAAC TTCTCTAGCATCCTCCAGTATG
 316 GAGGCTGCATTAAGACTGCATGAAGGAGAGGGAGAGAAGGGAGAA
 361 ACAGAGCAGCTGGACAAGAGGACAGGTATAGGGAATAAGGGAGAA
 406 GCCAGTAAGGCAGGAAAGACCCTCCGTGACAAAGGGGCAGGGAAC
 451 AGAACTCAAACATTTAATGGCAGGTAACCCAGGTTAGAATGGTAA

 496 ATTGAAAGGTGAATATAAAGGGAGAATGGTGAAATGAATTTTCTG
 MetAsnSheLeu

 541 AAATTAATTGCTGTGTTTATAGTTTTTAGCCATGCATCGGAATCA
 LysLeuIleAlaValPheIleValPheSerHisAlaSerGluSer

 586 CCTCAGGACTCCACTCCCAATCAATTATATATCTGGGGGAGGACC
 ProGlnAspSerThrProAsnGlnLeuTyrIleTrpGlyArgThr

 631 AAGGCGTTGGTATTTTTCAGAAGCTCCACTGGTGATTCTGACAGC
 LysAlaLeuValPhePheArgSerSerThrGlyAspSerAspSer

 676 ACAGCTAGGATTAAGAAACTGATCAATGGGAACGGCATGCCTGTT
 ThrAlaArgIleLysLysLeuIleAsnGlyAsnGlyMetProVal

 721 GCAGAGGAGCTTCCCTGGGAAATGTCACACACAGAACATCAATCT
 AlaGluGluLeuProTrpGluMetSerHisThrGluHisGlnSer

 766 TCCTTCCCCACTCCTGAGATCCCTCATTCTTTGGCACCAGGAACA
 SerPheProThrProGluIleProHisSerLeuAlaProGlyThr

 811 GTTGCAATTAGTAAACCCTGGTTCCCTGCTGTCTCACAAATCGCA
 ValAlaIleSerLysProTrpPheProAlaValSerGlnIleAla

 856 AGAGTCCAACGTGTGGATATAAACTTTTGTTCATGGGAGGATCTT
 ArgValGlnArgValAspIleAsnPheCysSerTrpGluAspLeu

 901 TCTCCAGTGGAAAAGCAACTGGGAAAAGCAGGACACACTGCACA
 SerProSerGlyLysAlaThrGlyLysSerArgThrHisCysThr

 946 GTGACTGCAGTTTCATCCAATGCCACCACCCATGCAGGCATAAAT
 ValThrAlaValSerSerAsnAlaThrThrHisAlaGlyIleAsn

 991 AATGAACATGGATGGGGGAGTCTGGAGCTGCTGAATTGAGGAAGA
 AsnGluHisGlyTrpGlySerLeuGluLeuLeuAsn

 1036 AAGAACACAGAAATTAAATTTCTCACAAAGGTTACCATTAAGCTA
 1081 GAGGAAGACCACACCACTGTGTGTCCACAAAGATACAGAGCCAGG
 1126 CCGGGTTTCAGCCATGCTGGTCATCTGCTCTATATAATAACAATTAT
 1171 TTAGAGATGGTGGGTAGAGAACAACACTACAGAAAAAAAAAAAAAAAA
 1216 AAAAAAAAAAAAAA

Fig. 4

TRANSLATED PROTEIN - NUCLEOTIDE 410 TO 889

1 ACGCGTCACATAAAGGAAAGATACGTTTTAATCATCTTTACAAGT
 46 GCGTCCTTGTACCTTTCGGGATAACCTGTACTGATTTCTCTGCAG
 91 GACCTTTTCAAAGAATCCTCTTCAAGAGAGAAACAAATTTTAGGC
 136 TGACGACTTCACGGAGAGGCAGGTTCTGCTGTTGCCAATGAACGA
 181 GAACTTTCTACTAGGCTGGCGGCATGCAGAGCCCACGTCTGTCAG
 226 CTGCCACCTTCGTAAAGCACACGTTTCACATGCATGAGCTCGAGT
 271 GGCTAGAACTTCAAACTGTGCTCAGGTTTTGTTTTGGAAGTTA
 316 TAAAAAAGTTGCTCACAAACAATAGTTATTGCCTTTTATATCTTT
 361 TATGTTAGTCTACTAGTCAGCATTCTGCCCCAAATGGAAAGCCAC

 406 TCCCATGGGAAGGGAGGGGGTAGCAGCTGGGAGTCTGCTCTTCCA
 MetGlyArgGluGlyValAlaAlaGlySerLeuLeuPheG1

 451 GCTGGGGGCCCTCCCACCCCATGGGGAGGAAAGACGTCAAGCTC
 nLeuGlyAlaLeuProProProTrpGlyGlyLysThrSerSerSe

 496 CAGCCACTGGCCCCGGTGGGTCCCAAAGCCCCACCCCTCATGCTC
 rSerHisTrpProArgTrpValProLysProHisProSerCysSe

 541 TCCTCTGGTCACCTCTATTTACGCTCACATGCCCCCTTCTGTCTC
 rProLeuValThrSerIleTyrAlaHisMetProLeuProValLe

 586 TCACCTGCACGTCACCAGCAGGTCCCGCCAACCCCAAATCTATCT
 uHisLeuHisValThrSerArgSerArgGlnProGlnIleTyrLe

 631 GGTGAAAACCTGGAGAACAAGAGCGGAGTCTAAGAGAGATGTAAA
 uValLysThrTrpArgThrArgAlaGluSerLysArgAspValAs

 676 TGAAAACACAGATCAACAGACACACCAGAAGGGAAGCGTTGTTTC
 nGluAsnThrAspGlnGlnThrHisGlnLysGlySerValValSe

 721 CGCGGGGAAAGGAGATGGAAAGGGGAAGAGAAGTGAAGAATTCTG
 rAlaGlyLysGlyAspGlyLysGlyLysArgSerGluGluPheCy

 766 CGCCCGAAGCTCGGGTTGGTGTCTGCTCAACTGCTTTACTCATTT
 sAlaArgSerSerGlyTrpCysLeuLeuAsnCysPheThrHisPh

 811 TAACCCTTTCACCTATCCTGGGAGAAACCCAGGCTTGTCACCTTT
 eAsnProPheThrTyrProGlyArgAsnProGlyLeuSerProPh

 856 TCATGTTGGGTTGTTTGTATTATTGGCCTCTTAAGTGAGAATTGAT
 eHisValGlyLeuPheValTyrTrpProLeuLys

 901 CCGTGAAGGGAAACAGACAGGAGGAGTCAGATTGCGAATACCTG
 946 GGGCTTCCTAGGGTCCAGTGCGGCAGTTACCGCACCTGCCTTCAC
 991 CGGTGAACCTTTAGCCAGCTGAACAACCACCAAAGCGCCCTGCAG

Fig. 5

1036 AGACAAGTCATCCAGCCCTCTGGCATGTCCCTGGTAGCCCGGGCA
1081 CCAGCCGCTGCGGCTTGTGAGGGGCACCATGCTCCACCCACGGG
1126 GACCTTCACAGTTGGAAAAAGAAGAGGAAAACTAATTCCTTCG
1171 GTAACAGTTTATTTTCATTTTGGGAAAGGCAAAACCACTACCTG
1216 GAACTCGGTGCCTCCGTGGTTAACTTTCCTATTTTGCTTGTGATT
1261 TAAAGGCTGTTCTGGGTGAGGGGGGAAAAGGTGTCTCCTTCGGTA
1306 GGAATATATAACGTGGTGATAACCTGTCACTAGGCAGAAGCATC
1351 CACTCTGCAGGGACAGTGGCCCCCTCAGGAAAGCCCGCCGCTCCTG
1396 GCCAAGGCCTCTCTGCAGACTCCACGGGGGCTCACCCCTCTGCCGT
1441 CAGGCGACTCTGAAATTCGACATTTCTCCCTTAAAGTCTCAACA
1486 GACACAAGAGAAGTTTCCATCAAGCAAGCACTGACATATTTATAT
1531 TAAAAAATAGTGCAAAATCTCAACATTTATATAAATAACTCTAAA
1576 CCCCTGCTTTGTAATTTTTTTCTTTACAAGGTAATACACACTTTC
1621 TGACTTGGCACTCAAAAATTGCCATTTTTTTCTCTTCTAGTTCA
1666 GAAAACAACTTTTTTTTAAATAGGCCTCTTCTAATACAAAAATA
1711 CTCCTGCCCTCGCACATACAGTTTCTCTTATCTTATATATATTTA
1756 TATATATAATATTGCAGATCTTTAAACAAAGGTTTGTGCAAATA
1801 TGTCTTTAAAGTTAAGTGAAATTATCATAAACAAAAGAAAATAAG
1846 CATTCACGCACGCAGCTCAACTAGAAACAAGAAAGACTACTGTAG
1891 AAATTTTTTTCTTTTGCCTTCAAGAC

Fig. 5 (continued)

TRANSLATED PROTEIN - NUCLEOTIDE 410 TO 892

1 ACGCGTCACATAAAGGAAAGATACGTTTTAATCATCTTTACAAGT
 46 GCGTCCTTGTACCTTTTCGGGATAACCTGTACTGATTTCTCTGCAG
 91 GACCTTTTCAAAGAATCCTCTTCAAGAGAGAAACAAATTTTAGGC
 136 TGACGACTTCACGGAGAGGCAGGTTCTGCTGTTGCCAATGAACGA
 181 GAACTTTCTACTAGGCTGGCGGCATGCAGAGCCCACGTCTGTCAG
 226 CTGCCACCTTTCGTAAAGCACACGTTTCACATGCATGAGCTCGAGT
 271 GGCTAGAACTTCAAACTGTGCTCAGGTTTTTGTGTTTGAAGTTA
 316 TAAAAAAGTTGCTCACAAACAATAGTTATTGCCTTTTATATCTTT
 361 TATGTTAGTCTACTAGTCAGCATTCTGCCCAAATGGAAAGCCAC

 406 TCCCATGGGAAGGGAGGGGGTAGCAGCTGGGAGTCTGCTCTTCCA
 MetGlyArgGluGlyValAlaAlaGlySerLeuLeuPheG1

 451 GCTGGGGGCCCTCCCACCCCATGGGGAGGAAAGACGTCAAGCTC
 nLeuGlyAlaLeuProProProTrpGlyGlyLysThrSerSerSe

 496 CAGCCACTGGCCCCGGTGGGTCCCAAAGCCCCACCCCTCATGCTC
 rSerHisTrpProArgTrpValProLysProHisProSerCysSe

 541 TCCTCTGGTCACCTCTATTTACGCTCACATGCCCCCTTCCTGTCT
 rProLeuValThrSerIleTyrAlaHisMetProLeuProValLe

 586 TCACCTGCACGTCACCAGCAGGTCCCGCCAACCCCAAATCTATCT
 uHisLeuHisvalThrSerArgSerArgGlnProGlnIleTyrLe

 631 GGTGAAAACCTGGAGAACAAGAGCGGAGTCTAAGAGAGATGTAAA
 uValLysThrTrpArgThrArgAlaGluSerLysArgAspValAs

 676 TGAAAACACAGATCAACAGACACACCAGAAGGGAAGCGTTGTTTC
 nGluAsnThrAspGlnGlnThrHisGlnLysGlySerValValSe

 721 CGCGGGGAAAGGAGATGGAAAGGGGAAGAGAAGTGAAGAATTCTG
 rAlaGlyLysGlyAspGlyLysGlyLysArgSerGluGluPheCy

 766 CGCCCGAAGCTCGGGTTGGTGTGTTGCTCAACTGCTTTACTCATTT
 sAlaArgSerSerGlyTrpCysLeuLeuAsnCysPheThrHisPh

 811 TAACCCTTTACCTATCCTGGGAGAAACCCAGGCTTGTCACCTTT
 eAsnProPheThrTyrProGlyArgAsnProGlyLeuSerProPh

 856 TCATGTTGGGTTGTTTATTGGCCTCTTAAGTGAGAATTGATCCGT
 eHisValGlyLeuPheIleGlyLeuLeuSerGluAsn

 901 GAAGGGAAACAGACAGGAGGAGGTCAGATTGCGAATACCTGGGGC
 946 TTCCTAGGGTCCAGTGCGGCAGTTACCGCACCTGCCTTCACCGGT
 991 GAACCTTTAGCCAGCTGAACAACCACCAAAGCGCCCTGCAGAGAC
 1036 AAGTCATCGAGCCCTCTGGCATGTCCCTGGTAGCCCGGGCACCAG
 1081 CCGCTGCGGCTTGTGAGGGGCACCATGCTCCACCCACGGGGACC
 1126 TTCACAGTTGGAAGAAAGAGAGGAAAGAACTAATTCCTTCGGTAA
 1171 CAGTTTATTTTCATTTTGGGAAAGGCAAAACCACTACCTGGAAC
 1216 TCGGTGCCTGNGANNTCTTANNTNCTNNTNAGNCNNATNNGNNA
 1261 NNNNTNNNNNANNTTNNNA

Fig. 6

TRANSLATED PROTEIN - NUCLEOTIDE 199 TO 1146

1 TAGAATTCAGCGGCCGCTTAATTCTAGAACGAATGCCAGTGCCTG
 46 GAGGCATGCAGGCCAGCTACGTGCCTGTGTGCGGCTCTGATGGG
 91 AGGTTTTATGAAAACCACTGTAAGCTCCACCGTGCTGCTTGCCTC
 136 CTGGGAAAGAGGATCACCGTCATCCACAGCAAGGACTGTTTCCTC

 181 AAAGGTGACACGTGCACCATGGCCGGCTACGCCCCGCTTGAAGAAT
 MetAlaGlyTyrAlaArgLeuLysAsn

 226 GTCCTTCTGGCACTCCAGACCCGTCTGCAGCCACTCCAAGAAGGA
 ValLeuLeuAlaLeuGlnThrArgLeuGlnProLeuGlnGluGly

 271 GACAGCAGACAAGACCCTGCCTCCCAGAAGCGCCTCCTGGTGGAA
 AspSerArgGlnAspProAlaSerGlnLysArgLeuLeuValGlu

 316 TCTCTGTTCAGGGACTTAGATGCAGATGGCAATGGCCACCTCAGC
 SerLeuPheArgAspLeuAspAlaAspGlyAsnGlyHisLeuSer

 361 AGCTCCGAAGTGGCTCAGCATGTGCTGAAGAAGCAGGACCTGGAT
 SerSerGluLeuAlaGlnHisValLeuLysLysGlnAspLeuAsp

 406 GAAGACTTACTTGGTTGCTCACCAGGTGACCTCCTCCGATTGAC
 GluAspLeuLeuGlyCysSerProGlyAspLeuLeuArgPheAsp

 451 GATTACAACAGTGACAGCTCCCTGACCCTCCGCGAGTTCTACATG
 AspTyrAsnSerAspSerSerLeuThrLeuArgGluPheTyrMet

 496 GCCTTCCAAGTGGTTCAGCTCAGCCTCGCCCCGAGGACAGGGTC
 AlaPheGlnValValGlnLeuSerLeuAlaProGluAspArgVal

 541 AGTGTGACCACAGTGACCGTGGGGCTGAGCACAGTGCTGACCTGC
 SerValThrThrValThrValGlyLeuSerThrValLeuThrCys

 586 GCCGTCCATGGAGACCTGAGGCCACCAATCATCTGGAAGCGCAAC
 AlaValHisGlyAspLeuArgProProIleIleTrpLysArgAsn

 631 GGGCTCACCTGAACTTCCTGGACTTGGAAGACATCAATGACTTT
 GlyLeuThrLeuAsnPheLeuAspLeuGluAspIleAsnAspShe

 676 GGAGAGGATGATTCCTGTACATCACCAAGGTGACCACCATCCAC
 GlyGluAspAspSerLeuTyrIleThrLysValThrThrIleHis

 721 ATGGGCAATTACACCTGCCATGCTTCCGGCCACGAGCAGCTGTTC
 MetGlyAsnTyrThrCysHisAlaSerGlyHisGluGlnLeuPhe

 766 CAGACCCACGTCCTGCAGGTGAATGTGCCGCCAGTCATCCGTGTC
 GlnThrHisValLeuGlnValAsnValProProValIleArgVal

Fig. 7

811 TATCCAGAGAGCCAGGCACAGGAGCCTGGAGTGGCAGCCAGCCTA
TyrProGluSerGlnAlaGlnGluProGlyValAlaAlaSerLeu

856 AGATGCCATGCTGAGGGCATTCCCATGCCCAGAATCACTTGGCTG
ArgCysHisAlaGluGlyIleProMetProArgIleThrTrpLeu

901 AAAAACGGCGTGGATGTCTCAACTCAGATGTCCAAACAGCTCTCC
LysAsnGlyValAspValSerThrGlnMetSerLysGlnLeuSer

946 CTTT TAGCCAATGGGAGCGAACTCCACATCAGCAGTGTT CGGTAT
LeuLeuAlaAsnGlySerGluLeuHisIleSerSerValArgTyr

991 GAAGACACAGGGGCATACACCTGCATTGCCAAAAATGAAGTGGGT
GluAspThrGlyAlaTyrThrCysIleAlaLysAsnGluValGly

1036 GTGGATGAAGATATCTCCTCGCTCTTCATTGAAGACTCAGCTAGA
ValAspGluAspIleSerSerLeuPheIleGluAspSerAlaArg

1081 AAGACCC TTGCAAACATCCTGTGGCGAGAGGAAGGTACCAAGCTT
LysThrLeuAlaAsnIleLeuTrpArgGluGluGlyThrLysLeu

1126 CATTGTTTTGCGTCATGCCTGTGATCACGTGTGTTTGGTTCTATG
HisCysPheAlaSerCysLeu

1171 ATGGGCCGTCCTTTCCATGATCTGCCACCAGCTTTCCCACACAAAG
1216 CAGCCCTATGGGAGCAGGAAGTCAATGTCAAATTC AAGTGGCATA
1261 TGCATTGAATCAAATTTAAAATGTACTCCTGTCTTTAATGAGAAA
1306 TTTT TAAATGCAAAGCTTTCATTAAAAGTGGCTTGTAACCTCTGC
1351 TGAAGCAGAACAGTTGGTAAGGGTTCCTGGTCAGATCTGGGCCTT
1396 AAAC TTTTTTCCAGTAGCTGACTGGTGTTGGGTTTAGTGTTTTGC
1441 CTATCTTGTTGGTTTTTAAAAAGACAAAACAAGTTGTAGATCTCT
1486 ACTAGATAGTCACTGTACCTTAAATATGCTTTGATTGAGGAAAAC
1531 CCGAGGAAAAAGCTGCCATGATTTCTGCCAATGTATATTTTTTAAA
1576 TGTATAGATGTTTAGAAACATATTTATCAAGCAAATCTTTAGTAA
1621 GTTGAGCCATATGAAGTTGCCATTTTTGTGCATCAAAGTGGTCTA
1666 AGATTGACAATTTTCATATGGCTGA

Fig. 7 (continued)

1 GGAGAGGGCTGCATTGCTGTGCTCACTGACCTTCTTTTATGCTGGCCTTTGGTTTCAAGTGGCACATCATTCTCGTTT
 81 TTGGCCCTCCAGCTGAACACCTGTTCTCTGTGGCACTGACTCTCTTTCCATAGGGACATCATACAACAGTCGCCTTTAT
 161 CTGAGGTTGTGCAAAGAGGGATGGAGGAGAAAACATGGAGAATCCCTGGCAGATTTCCTCCAGGACGAGAGAAGGATATC
 241 CAATTGCTCATCAGGGAAGGTGCTAGGTCTCCAGCCAGACGCCCTCAGAGGCCGGTGTCAAGTCTCCCTCACCTCTGTG
 321 ATGTGAAGTCAGCTCGTTCATGACCTGGGCAGGCAGAGGGTCAGAGGGGCAGATGGAGCACTCTGGCCTGATGAAGACT
 401 CATCAAAATGAAACCAGGAGGCTTTTGGCTGCATCTCACACTGCTCGGAGCCTCCCTGCCGGCTGCGCTGGGATGGATGG
 MetLysProGlyGlyPheTrpLeuHisLeuThrLeuLeuGlyAlaSerLeuProAlaAlaLeuGlyTrpMetA
 481 ACCCAGGAACCAGCAGAGGCCCGGATGTGGGTGTGGGGAGTCACAGGCAGAGGAGCCAGAAGCTTTGAAGTCACAAGA
 spProGlyThrSerArgGlyProAspValGlyValGlyGluSerGlnAlaGluGluProArgSerPheGluValThrArg
 561 AGAGAAGGGCTTTCCAGCCACAACGAGCTGCTGGCCTCTCGCGGAAGAAGTTCTGCAGCCGAGGAGCCGGTGCCTGCT
 ArgGluGlyLeuSerSerHisAsnGluLeuLeuAlaSerCysGlyLysLysPheCysSerArgGlySerArgCysValLe
 641 CAGCAGGAAGACAGGGGAGCCCGAATGCCAGTGCCTGGAGGCATGCAGGCCAGCTACGTGCCTGTGTGGGCTCTGATG
 uSerArgLysThrGlyGluProGluCysGlnCysLeuGluAlaCysArgProSerTyrValProValCysGlySerAspG
 721 GGAGGTTTTATGAAAACCACTGTAAGCTCCACCGTGCTGCTTGCCCTCTGGGAAAGAGGATCACCGTCATCCACAGCAAG
 lyArgPheTyrGluAsnHisCysLysLeuHisArgAlaAlaCysLeuLeuGlyLysArgIleThrValIleHisSerLys
 801 GACTGTTTCTCAAAGGTGACACGTGCACCATGGCCGGCTACGCCCGCTTGAAGAATGTCTTCTGGCACTCCAGACCCG
 AspCysPheLeuLysGlyAspThrCysThrMetAlaGlyTyrAlaArgLeuLysAsnValLeuLeuAlaLeuGlnThrAr
 881 TCTGCAGCCACTCCAAGAAGGAGACAGCAGACAAGACCCTGCCTCCAGAAGCGCCTCCTGGTGAATCTCTGTTACAGG
 gLeuGlnProLeuGlnGluGlyAspSerArgGlnAspProAlaSerGlnLysArgLeuLeuValGluSerLeuPheArgA
 961 ACTTAGATGCAGATGGCAATGGCCACCTCAGCAGCTCCGAACCTGGCTCAGCATGTGCTGAAGAAGCAGGACCTGGATGAA
 spLeuAspAlaAspGlyAsnGlyHisLeuSerSerSerGluLeuAlaGlnHisValLeuLysLysGlnAspLeuAspGlu
 1041 GACTTACTTGGTTGCTCACCAGGTGACCTCCTCCGATTGACGATTACAACAGTGACAGCTCCCTGACCTCCGCGAGTT
 AspLeuLeuGlyCysSerProGlyAspLeuLeuArgPheAspAspTyrAsnSerAspSerSerLeuThrLeuArgGluPh
 1121 CTACATGGCCTTCCAAGTGTTTACGCTCAGCCTCGCCCCGAGGACAGGGTCAGTGTGACCACAGTGACCGTGGGGCTGA
 eTyrMetAlaPheGlnValValGlnLeuSerLeuAlaProGluAspArgValSerValThrThrValThrValGlyLeuS
 1201 GCACAGTGCTGACCTCGCCGTCCATGGAGACCTGAGGCCACCAATCATCTGGAAGCGCAACGGGCTCACCTGAATTC
 erThrValLeuThrCysAlaValHisGlyAspLeuArgProProIleIleTrpLysArgAsnGlyLeuThrLeuAsnPhe
 1281 CTGGACTTGAAGACATCAATGATTTGGAGAGGATGATTCCCTGTACATCACCAGGTGACCACCATCCACATGGGCAA
 LeuAspLeuGluAspIleAsnAspPheGlyGluAspSerLeuAlaTyrIleThrLysValThrThrIleHisMetGlyAs
 1361 TTACACCTGCCATGCTTCCGCCACGAGCAGCTGTTCAGACCACCGTCTGTCAGGTGAATGTGCCGCCAGTCATCCGTG
 nTyrThrCysHisAlaSerGlyHisGluGlnLeuPheGlnThrHisValLeuGlnValAsnValProProValIleArgV
 1441 TCTATCCAGAGAGCCAGGCACAGGAGCCTGGAGTGGCAGCCAGCCTAAGATGCCATGCTGAGGGCATTCCCATGCCCA
 alTyrProGluSerGlnAlaGlnGluProGlyValAlaAlaSerLeuArgCysHisAlaGluGlyIleProMetProArg
 1521 ATCACTTGGCTGAAAAACGGCGTGGATGTCTCAACTCAGATGTCAAACAGCTCTCCCTTTTAGCCAATGGGAGCGAACT
 IleThrTrpLeuLysAsnGlyValAspValSerThrGlnMetSerLysGlnLeuSerLeuLeuAlaAsnGlySerGluLe
 1601 CCACATCAGCAGTGTTCGGTATGAAGACACAGGGGCATACCTGCATTGCCAAAAATGAAGTGGGTGTGGATGAAGATA
 uHisIleSerSerValArgTyrGluAspThrGlyAlaTyrThrCysIleAlaLysAsnGluValGlyValAspGluAspI
 1681 TCTCCTCGTCTTTCATTGAAGACTCAGCTAGAAAGACCCTTGCAAACATCCTGTGGCGAGAGGAAGGCCTCAGCGTGGGA
 leSerSerLeuPheIleGluAspSerAlaArgLysThrLeuAlaAsnIleLeuTrpArgGluGluGlyLeuSerValGly
 1761 AACATGTTCTATGTCTTCTCCGACGACGGTATCATCGTCATCCATCCTGTGGACTGTGAGATCCAGAGGCACCTCAAACC
 AsnMetPheTyrValPheSerAspAspGlyIleIleValIleHisProValAspCysGluIleGlnArgHisLeuLysPr
 1841 CACGGAAGATTTTCATGAGCTATGAAGAAATCTGTCTCAAAGAGAAAAAATGCAACCCAGCCCTGCCAGTGGGTAT
 oThrGluLysIlePheMetSerTyrGluGluIleCysProGlnArgGluLysAsnAlaThrGlnProCysGlnTrpValS
 1921 CTGCAGTCAATGTCCGAACCGGTACATCTATGTGGCCAGCCAGCACTGAGCAGAGTCTTGTGGTGCACATCCAAGCC
 erAlaValAsnValArgAsnArgTyrIleTyrValAlaGlnProAlaLeuSerArgValLeuValValAspIleGlnAla
 2001 CAGAAAGTCTACAGTCCATAGGTGTGGACCCTCTGCCGGCTAAGCTGTCTATGACAAGTCACATGACCAAGTGTGGGT
 GlnLysValLeuGlnSerIleGlyValAspProLeuProAlaLysLeuSerTyrAspLysSerHisAspGlnValTrpVa
 2081 CCTGAGCTGGGGGACGTGCACAAGTCCCGACCAAGTCTCAGGTGATCAGAGAAGCCAGCACCGGCCAGAGCCAGCACC
 lLeuSerTrpGlyAspValHisLysSerArgProSerLeuGlnValIleThrGluAlaSerThrGlyGlnSerGlnHisL
 2161 TCATCCGCACACCTTTGAGGAGTGGATGATTTCTTCATTCCCCCAACAAACCTCATCATCAACCACATCAGGTTTGGC
 eulleArgThrProPheAlaGlyValAspAspPhePheIleProProThrAsnLeuIleIleAsnHisIleArgPheGly

Fig. 8

2241 TTCATCTTCAACAAGTCTGATCCTGCAGTCCACAAGGTGGACCTGGAACAATGATGCCCCCAAGACCATCGGCCTGCA
 PheIlePheAsnLysSerAspProAlaValHisLysValAspLeuGluThrMetMetProLeuLysThrIleGlyLeuHi
 2321 CCACCATGGCTGCGTGCCCCAGGCCATGGCACACCCACCTGGGCGGCTACTTCTTCATCCAGTGCCGACAGGACAGCC
 sHisHisGlyCysValProGlnAlaMetAlaHisThrHisLeuGlyGlyTyrPhePheIleGlnCysArgGlnAspSerP
 2401 CCGCCTCTGCTGCCGACAGCTGCTCGTTGACAGTGTACAGACTCTGTGCTTGGCCCCAATGGTGATGTAACAGGCACC
 roAlaSerAlaAlaArgGlnLeuLeuValAspSerValThrAspSerValLeuGlyProAsnGlyAspValThrGlyThr
 2481 CCACACACATCCCCGACGGCGCTTCATAGTCAGTGTGACAGCTGACAGCCCCCTGGCTGCACGTGCAGGAGATCACAGT
 ProHisThrSerProAspGlyArgPheIleValSerAlaAlaAlaAspSerProTrpLeuHisValGlnGluIleThrVa
 2561 GCGGGGCGAGATCCAGACCCTGTATGACCTGCAATAAACTCGGGCATCTCAGACTTGGCCTTCCAGCGCTCCTTCACTG
 lArgGlyGluIleGlnThrLeuTyrAspLeuGlnIleAsnSerGlyIleSerAspLeuAlaPheGlnArgSerPheThrG
 2641 AAAGCAATCAATACAACATCTACGGCGCTCTGCACACGGAGCCGACCTGCTGTCTTGGAGCTGTCCACGGGAAGGTG
 luSerAsnGlnTyrAsnIleTyrAlaAlaLeuHisThrGluProAspLeuLeuPheLeuGluLeuSerThrGlyLysVal
 2721 GGCATGCTGAAGAACTTAAAGGAGCCACCCGACGGCCAGCTCAGCCCTGGGGGGGTACCCACAGAATCATGAGGGACAG
 GlyMetLeuLysAsnLeuLysGluProProAlaGlyProAlaGlnProTrpGlyGlyThrHisArgIleMetArgAspSe
 2801 TGGGCTGTTTGGACAGTACCTCCTCACACCAGCCCGAGAGTCACTGTTCTCATCAATGGGAGACAAAACAGCTGCGGT
 rGlyLeuPheGlyGlnTyrLeuLeuThrProAlaArgGluSerLeuPheLeuIleAsnGlyArgGlnAsnThrLeuArgC
 2881 GTGAGGTGTCAAGTATAAAGGGGGGACCACAGTGGTGTGGGTGGGTGAGGTATGAAGGGCCAGAGCAGAGCCCTGGGC
 ysGluValSerGlyIleLysGlyGlyThrThrValValTrpValGlyGluVal
 2961 CAAGGAACACCCCTAGTCTGACACTGCAGCCTCAAGCAGGTACGCTGTACATTTTTACAGACAAAAGCAAAAACCTGT
 3041 ACTCGCTTTGTGGTTCAACACTGGTCTCCTTGCAAGTTTCTAGTATAAGGTATCGCTGCTACCAAGATTGGGGTTTTT
 3121 TCGTTAGGAAGTATGATTTATGCCTTGAGCTACGATGAGAATATATGCTGCTGTGTAAAGGGATCATTTCTGTGCCAAGC
 3201 TGCACACCGAGTGACCTGGGGACATCATGGAACCAAGGGATCTGCTCTCCAAGCAGACACCTCTGTCAGTTGCCCTTCAC
 3281 ATAGTCATTGTCCCTTACTGCCAGACCCAGCCAGACTTTGCCCTGACGGAGTGGCCCGGAAGCAGAGGCCAGCAGGAGC
 3361 AGGGGCCTCCCTCCCGAAGTGAAGCCCATCCGTCCTCGCGTGGGACCGCATCTTCTCCCTCGCAGCTGCTTCTTGCTTT
 3441 TCTTTCCATTGACTTGCTGTAAGCCTGAGGGAGAGCCAACAAGACTTACTGCATCTTGGGGGATGGGGAATCACTCAC
 3521 TTTATTTTGGAAATTTTGTATTAATAAAAAAATTTTATAATCTCAAATGCTAGTAAGCAGAAAGATGCTCTCCGAGGTCCA
 3601 ACTATATCCTTCCCTGCCTTAGGCCGAGTCTCGGGGGTGGTCACAACCCACATCCACAGCCAGAAAGAACAATGGTCA
 3681 TCTGAGAATACTGGCCCTGTGCACTATTGCCACCTGCTTCTCCAAGAGCAGACCAGGCCACCTCATCCGTAAGGACTCG
 3761 GTTCTGTGTTGGGACCCCAAAAAACCAGAACAAGTTCTGTGTGCTCCTTTTACGACAGAAAGGGAGACATCTCATTAGTC
 3841 AGGTCTGGTACCCAGATTTCAGGGCAGACTGGGCTTGCTGGCAAGGTATGGGTGGCCTCCAGGCTCAATGCAGAAACCC
 3921 CAAGGACACGAGTGGGGCCAGGTGAGTTCCTGAAGCTATACCTTTTCAAAACAGATTTTGTTTTCTACCTGTGGCCCAT
 4001 CCACTCCTCTCTGGTACCCCATCCCCGCATCAGCACTGCAGAGAGAACACATTTCCGGCAGGGTTTTCCTTACCCACATTC
 4081 CCCAATCAATACACACACTGCAGAACCCAGAACAGAAGGCCACAGGCTGGCACTACTGCATTCTCCTTATGTGTCTCA
 4161 GGCTGTGGTGACTCTCACATGGGCATCGAAGAAGTACAACCCACATAGCCCTCTGGAGACCGCCTAGATCAGAGACTCAG
 4241 CAAAAACAGGCTCGCCTTCCCTCTCCACATATGAGTGAAGTTACATGTGTCTGTTGAATGATCATTTTGAAGCC
 4321 ACACGGGTTGGGAGAGGTGGTCTCACCACAGACGCTTTTGCTAATTGGCCACCTTCACCTACTGACATGACCAGGATTT
 4401 TCCTTTGCCATTAAAGGAATGAAGTCTTTCAAGGAGAGGAAACCTAGACTCTGTGTCACTCTCAACACACAGCTCCTT
 4481 TCACTCCTGCCTGACTGCCAAGCCACCTGCATCCCCGCCCCAGATCTCATGAGATCAATCACTTGATGTCTACGCAA
 4561 CTTGGTCCACAAACGCCTGTCCCTGTAACTCCTAGGGGTGGCCTAGACAGGTACGTCGTGTTTTTATTTTAAAGAT
 4641 ATGCTATGTAGATATAAGTTGAGGAAGCTCACTCAAAGCCTAGAATGCAGTTTCACAGTAGCTGGGATGCATGGATGA
 4721 CCCATCTCAGCCCTTTTTTTTTCTGCTCAATATCTTGATATGTTATGTTTACTCCCAATCTCCCATTTTTTACCACTAA
 4801 AATTTCTCAACTTTTATAAACTTTTTTTGGAAAAATTTCCATTGTATCAGCCCTGACAGAAAAAGGATCTCTGAGCCT
 4881 AAAGGAGGAAAAGTCCACCAACTACCAGACCAGAACAGAGCCCTCTGGGCAGCAGGATTCCTAAGTCAAAGACCAGT
 4961 TTGACCCAAACTGGCCTTTTAAAAATATCAGGAGTGCAGAGTCAACTTCTGCAGCACCTGCTTCTCCCCACTGTCCCT
 5041 TCCATCTTGAATGTGTCTAAAAAAGCATAGCTGCCCTTTGCTGTCTCAGAGTGCATTTCTGGAGACGGCAGGCTTAG
 5121 GTCTCACTGACAGCATGCCAGACACAGTGAATCGAAGCAGGCTGAAGCCTAGGTGACGGGTTTCAGGAGTCCAGCCCCA
 5201 GGAGGCAAGTCAACCAATGCAGGGAGGTAAATGCCTTTTGGCAGGAAACCAATAGAGTTGGTTGGGTGGGAGTCAGGG
 5281 GTGGGAGGAGAAGGAGGAAGAGGAGGAAGGCCAGACTGGCCTGCCCTTTCTCCATACTTCAACCCAGCAGAGGTTTCATG
 5361 GGACACAGTTGGAAGCCACTGGGAGGAATGCCTCACTACAGGGGGGCTCCTGTAGCAAGCCAGCCGGTAACTCTCC
 5441 TAATGAACCCACAAGGTCAATTCACAACTGATATCTTAGCTATTAAAGAGTACTGACTTTACCAAAAGAAATCATCAAGA
 5521 AAGCTATTTATATAAACCCCTCAGTCATTTTGAAATAAAATTAATTTTACAA

Fig. 8 (continued)

FRAME: 3 - NUCLEOTIDE 420 TO 2864

1
 CAATTTACACAGGAAACAGCTATGCCATGATTACGCAAGTTGGTACCGAGCTCGGATCCACTAGTAACGGCCGCCAGTG
 81
 TGCTGGAATTCGGCTTACTCACTATAGGGCTCGAGCGGCTGCCCCGGCAGGTCATTAATTCATTTCTTTTAGAGTATC
 161
 ACAGCTTTCTCCTTCACTGACCACCTTTGCTTCTGTGAGAAAGCCCTGGACAGAACTCTCTGTGGGATTCTGCCCATG
 241
 TTTCTGAGATATCGCCTCAATTGTCTGGCTGGGCTGTGGGTCTGCCCCTTTACAGATGGGCAAACCTGGAGTGGGAAG
 321
 TATCCGGGTGGCTTCCTCAGGCCTGCAGCTGGTGGAGCAGCTACTGAAACAATCAGGAGCCCAGAAGCTTTGAAGTCACA
 401
 AGAAGAGAAGACTCCCAGAATGCAGTGTGATGTTGGTGTGGACGCCTGTTTCGCCTTTCACCTAAACGTGCCCTTTCCA
 MetGlnCysAspValGlyAspGlyArgLeuPheArgLeuSerLeuLysArgAlaLeuSerS
 481
 GCTGCCCTGACCTCTTTGGGCTTTCCAGCCGCAACGAGCTGCTGGCCTCTGCGGAAGAAGTTCTGCAGCCGAGGGAGC
 erCysProAspLeuPheGlyLeuSerSerArgAsnGluLeuLeuAlaSerCysGlyLysLysPheCysSerArgGlySer
 561
 CGGTGCGTGTCTCAGCAGGAAGACAGGGGAGCCCGAATGCCAGTGCCTGGAGGCATGCAGGCCAGCTACGTGCCTGTGTG
 ArgCysValLeuSerArgLysThrGlyGluProGluCysGlnCysLeuGluAlaCysArgProSerTyrValProValCy
 641
 CGGCTCTGATGGGAGGTTTTATGAAAACCACTGTAAGCTCCACCGTGTCTTGCCTCCTGGGAAAGAGGATCACCGTCA
 sGlySerAspGlyArgPheTyrGluAsnHisCysLysLeuHisArgAlaAlaCysLeuLeuGlyLysArgIleThrValI
 721
 TCCACAGCAAGGACTGTTTCCTCAAAGTGACACGTGCACCATGGCCGGCTACGCCCCGCTTGAAGAATGTCTTCTGGCA
 leHisSerLysAspCysPheLeuLysGlyAspThrCysThrMetAlaGlyTyrAlaArgLeuLysAsnValLeuLeuAla
 801
 CTCCAGACCCGTCTGCAGCCACTCCAAGAAGGAGACAGCAGACAAGACCCTGCCTCCCAGAAGCGCCTCCTGGTGGAAATC
 LeuGlnThrArgLeuGlnProLeuGlnGluGlyAspSerArgGlnAspProAlaSerGlnLysArgLeuLeuValGluSe
 881
 TCTGTTTCAAGGACTTAGATGCAGATGGCAATGGCCACCTCAGCAGCTCCGAACCTGGCTCAGCATGTCTGAAGAAGCAGG
 rLeuPheArgAspLeuAspAlaAspGlyAsnGlyHisLeuSerSerSerGluLeuAlaGlnHisValLeuLysLysGlnA
 961
 ACCTGGATGAAGACTTACTTGGTTGCTCACCAGGTGACCTCTCCGATTTGACGATTACAACAGTGACAGCTCCCTGACC
 spLeuAspGluAspLeuLeuGlyCysSerProGlyAspLeuLeuArgPheAspAspTyrAsnSerAspSerSerLeuThr
 1041
 CTCCGCGAGTTCTACATGGCCTTCCAAGTGGTTCAGCTCAGCCTCGCCCCGAGGACAGGGTCAGTGTGACCACAGTGAC
 LeuArgGluPheTyrMetAlaPheGlnValValGlnLeuSerLeuAlaProGluAspArgValSerValThrThrValTh
 1121
 CGTGGGGCTGAGCACAGTGTGACCTGCGCCGTCCATGGAGACCTGAGGCCACCAATCATCTGGAAGCGCAACGGGCTCA
 rValGlyLeuSerThrValLeuThrCysAlaValHisGlyAspLeuArgProProIleIleTrpLysArgAsnGlyLeuT
 1201
 CCCTGAACCTCCTGGACTTGAAGACATCAATGACTTTGGAGAGGATGATTCCCTGTACATCACCAGGTGACCACCATC
 hrLeuAsnPheLeuAspLeuGluAspileAsnAspPheGlyGluAspAspSerLeuTyrIleThrLysValThrThrIle
 1281
 CACATGGGCAATTACACCTGCCATGCTTCCGGCCACGAGCAGCTGTTCCAGACCCACGTCCTGCAGGTGAATGTGCCGCC
 HisMetGlyAsnTyrThrCysHisAlaSerGlyHisGluGlnLeuPheGlnThrHisValLeuGlnValAsnValProPr

Fig. 9

1361 AGTCATCCGTGTCATCCAGAGAGCCAGGCACAGGAGCCTGGAGTGGCAGCCAGCCTAAGATGCCATGCTGAGGGCATTCC
oValIleArgValTyrProGluSerGlnAlaGlnGluProGlyValAlaAlaSerLeuArgCysHisAlaGluGlyIleP
1441 CCATGCCCAGAATCACTTGGCTGAAAAACGGCGTGGATGTCTCAACTCAGATGTCCAAACAGCTCTCCCTTTTAGCCAAT
roMetProArgIleThrTrpLeuLysAsnGlyValAspValSerThrGlnMetSerLysGlnLeuSerLeuLeuAlaAsn
1521 GGGAGCGAACTCCACATCAGCAGTGTTCGGTATGAAGACACAGGGGCATACACCTGCATTGCCAAAAATGAAGTGGGTGT
GlySerGluLeuHisIleSerSerValArgTyrGluAspThrGlyAlaTyrThrCysIleAlaLysAsnGluValGlyVa
1601 GGATGAAGATATCTCCTCGCTCTTCATTGAAGACTCAGCTAGAAAGACCCTTGCAAACATCCTGTGGCGAGAGGAAGGCC
lAspGluAspIleSerSerLeuPheIleGluAspSerAlaArgLysThrLeuAlaAsnIleLeuTrpArgGluGluGlyL
1681 TCAGCGTGGGAAACATGTTCTATGTCTTCTCCGACGACGGTATCATCGTCATCCATCCTGTGGACTGTGAGATCCAGAGG
euSerValGlyAsnMetPheTyrValPheSerAspAspGlyIleIleValIleHisProValAspCysGluIleGlnArg
1761 CACCTCAAACCCACGAAAAGATTTTCATGAGCTATGAAGAAATCTGTCTCAAAGAGAAAAAATGCAACCCAGCCCTG
HisLeuLysProThrGluLysIlePheMetSerTyrGluGluIleCysProGlnArgGluLysAsnAlaThrGlnProCy
1841 CCAGTGGGTATCTGCAGTCAATGTCCGGAACCGGTACATCTATGTGGCCAGCCAGCACTGAGCAGAGTCCTTGTGGTGG
sGlnTrpValSerAlaValAsnValArgAsnArgTyrIleTyrValAlaGlnProAlaLeuSerArgValLeuValVala
1921 ACATCCAAGCCCAGAAAGTCCTACAGTCCATAGGTGTGGACCCTCTGCCGGCTAAGCTGTCTATGACAAGTCACATGAC
spIleGlnAlaGlnLysValLeuGlnSerIleGlyValAspProLeuProAlaLysLeuSerTyrAspLysSerHisAsp
2001 CAAGTGTGGGTCTGAGCTGGGGGGACGTGCACAAGTCCCGACCAAGTCTCCAGGTGATCACAAGCCAGCACCAGGCCA
GlnValTrpValLeuSerTrpGlyAspValHisLysSerArgProSerLeuGlnValIleThrGluAlaSerThrGlyGl
2081 GAGCCAGCACCTCATCCGCACACCCTTTGCAGGAGTGGATGATTTCTTCATTCCCCCAACAAACCTCATCATCAACCACA
nSerGlnHisLeuIleArgThrProPheAlaGlyValAspAspPhePheIleProProThrAsnLeuIleIleAsnHisI
2161 TCAGGTTTGGCTTCATCTTCAACAAGTCTGATCCTGCAGTCCACAAGGTGGACCTGGAAACAATGATGCCCTCAAGACC
leArgPheGlyPheIlePheAsnLysSerAspProAlaValHisLysValAspLeuGluThrMetMetProLeuLysThr
2241 ATCGGCCTGCACCACCATGGCTGCGTGCCCCAGGCCATGGCACACACCCACCTGGGCGGCTACTTCTTCATCCAGTGCCG
IleGlyLeuHisHisHisGlyCysValProGlnAlaMetAlaHisThrHisLeuGlyGlyTyrPhePheIleGlnCysAr
2321 ACAGGACAGCCCCGCTCTGCTGCCCCGACAGCTGCTCGTTGACAGTGTACAGACTCTGTGCTTGGCCCCAATGGTGATG
gGlnAspSerProAlaSerAlaAlaArgGlnLeuLeuValAspSerValThrAspSerValLeuGlyProAsnGlyAspV
2401 TAACAGGCACCCCACACATCCCCGACGGGCGCTTCATAGTCAGTGTGCTGCAGCTGACAGCCCTGGCTGCACGTGCAG
alThrGlyThrProHisThrSerProAspGlyArgPheIleValSerAlaAlaAlaAspSerProTrpLeuHisValGln
2481 GAGATCACAGTGGGGGCGAGATCCAGACCCTGTATGACCTGCAAATAAACTCGGGCATCTCAGACTTGGCCTTCCAGCG
GluIleThrValArgGlyGluIleGlnThrLeuTyrAspLeuGlnIleAsnSerGlyIleSerAspLeuAlaPheGlnAr
2561 CTCCTTCACTGAAAGCAATCAATACAACATCTACGCGGCTCTGCACACGGAGCCGGACCTGCTGTTCTGGAGCTGTCCA
gSerPheThrGluSerAsnGlnTyrAsnIleTyrAlaAlaLeuHisThrGluProAspLeuLeuPheLeuGluLeuSert

Fig. 9 (continued)

2641
 CGGGGAAGGTGGGCATGCTGAAGAACTTAAAGGAGCCACCCGAGGGCCAGCTCAGCCCTGGGGGGGTACCCACAGAATC
 hrGlyLysValGlyMetLeuLysAsnLeuLysGluProProAlaGlyProAlaGlnProTrpGlyGlyThrHisArgIle
 2721
 ATGAGGGACAGTGGGCTGTTGGACAGTACCTCCTCACACCAGCCCAGAGTCACTGTTCCCTCATCAATGGGAGACAAAA
 MetArgAspSerGlyLeuPheGlyGlnTyrLeuLeuThrProAlaArgGluSerLeuPheLeuIleAsnGlyArgGlnAs
 2801
 CACGCTGCGGTGTGAGGTGTCAGGTATAAAGGGGGGACCACAGTGGTGTGGGTGGGTGAGGTATGAAGGGCCCAGAGCA
 nThrLeuArgCysGluValSerGlyIleLysGlyGlyThrThrValValTrpValGlyGluVal
 2881
 GAGCCCTGGGCCAAGGAACACCCCTAGTCTGACACTGCAGCCTCAAGCAGGTACGCTGTACATTTTTACAGACAAAAG
 2961
 CAAAAACCTGTACTCGCTTTGTGGTTCAACACTGGTCTCCTTGCAAGTTTCCTAGTATAAGGTATGCGCTGCTACCAAGA
 3041
 TTGGGGTTTTTTCGTTAGGAAGTATGATTTATGCCTTGAGCTACGATGAGAACATATGCTGCTGTGTAAAGGGATCATTT
 3121
 CTGTGCCAAGCTGCACACCGAGTGACCTGGGGACATCATGGAACCAAGGGATCCTGCTCTCCAAGCAGACACCTCTGTCA
 3201
 GTTGCCCTTCACATAGTCATTGTCCCTTACTGCCAGACCCAGCCAGACTTTGCCCTGACGGAGTGGCCCGGAAGCAGAGGC
 3281
 CGACCAGGAGCAGGGGCCTCCCTCCCGAACTGAAAGCCCATCCGTCTCGCGTGGGACCGCATCTTCTCCCTCGCAGCTG
 3361
 CTTCTTGCTTTTCTTTCCATTTGACTTGCTGTAAGCCTGAGGGAGAGCCAACAAGACTTACTGCATCTTGGGGGATGGGG
 3441
 AAATCACTCACTTTATTTTGGAAATTTTTGATTAAAAAAAATTTTATAATCTCAAATGCTAGTAAGCAGAAAGATGCTC
 3521
 TCCGAGGTCCAATATATCCTTCCCTGCCTTAGGCCGAGTCTCGGGGGTGGTCACAACCCACATCCACAGCCAGAAAG
 3601
 AACAAATGGTCATCTGAGAATACTGGCCCTGTGCGACTATTGCCACCCTGCTTCTCCAAGAGCAGACCAGGCCACCTCATCC
 3681
 GTAAGGACTCGGTTCTGTGTTGGGACCCCAAAAAACCAGAACAAAGTTCTGTGTGCCTCCTTTCAGCACAGAAGGGAGACA
 3761
 TCTCATTAGTCAGGTCTGGTACCCAGATTAGGGCAGACTGGGCTTGCCCTGGCAAGGTATGGGTGGCTCCAGGCTCAA
 3841
 TGCAGAAACCCCAAGGACACGAGTGGGGCCAGGTGAGTTCTTGAAGCTATACCTTTTCAAACAGATTTGTTTTCTTAC
 3921
 CTGTGGCCCATCCACTCCTCTCTGGTACCCCATCCCCGCATCAGCACTGCAGAGAGAACACATTTTCGGCGAGGGTTTTCT
 4001
 TACCCACATTTCCCAATCAATACACACACTGCAGAACCCAGAACAGAAGGCCACAGGCTGGCACTACTGCATTCTCCT
 4081
 TATGTGTCTCAGGCTGTGGTGAATCTCACATGGGCATCGAAGAAGTACAACCCACATAGCCCTCTGGAGACCGCCTAGAT
 4161
 CAGAGACTCAGCAAAAACAGGCTCGCCTTCCCTCTCCACATATGAGTGGAACCTTACATGTGTCTTGGTTTGAATGATCA
 4241
 TTTTGCAAGCCACACGGGTGGGAGAGGTGGTCTACCACAGACGTCTTTGCTAATTTGGCCACCTTCACCTACTGACAT
 4321
 GACCAGGATTTTCTTTGCCATTAAAGGAATGAACTCTTTCAAGGAGAGGAAACCCTAGACTCTGTGTCACTCTCAACACA
 4401
 CACAGCTCCTTTCACTCCTGCCTGACTGCCAAGCCACCTGCATCCCCCGCCCAGATCTCATGAGATCAATCACTTGTAT

Fig. 9 (continued)

4481 GTCTCAGCAACTTGGTCCACCAzACGCCTGTCCCCTGTAACCTCTAGGGGTGCGCCTAGACAGGTACGTCTGTTTTTA
4561 TTTTAAAAGATATGCTATGTAGATATAAGTTGAGGAAGCTCACCTCAAAAGCCTAGAATGCAGTTTCACAGTAGCTGGGA
4641 TGCATGGATGACCCATCTCACCCCTTTTTTTTCTGCCTCAATATCTTGATATGTTATGTTTACTCCCAATCTCCCAT
4721 TTTACCACTAAAATTCTCCAACCTTCATAAACTTTTTTTTGGAAAAATTTCATTGTATCAGCCCCCTGACAGARAAAGGA
4801 TCTCTGAGCCTAAAGGAGGAAAAGTCCCACCAACTACCAGACCAGAACACGAGCCCCCTCTGGGCAGCAGGATTCTTAAGT
4881 CAAAGACCAGTTTGACCCAACTGGCCTTTTAAAATAATCAGGAGTGACAGAGTCAACTTCTGCAGCACCTGCTTCTCCC
4961 CCACTGTCCCTTCCATCTTGGAATGTGTCTAAAAAAGCATAGCTGCCCTTTGCTGTCTCAGAGTGCATTTCTGGAGAC
5041 GGCAGGCTTAGGTCTCACTGACAGCATGCCAGACACAACCTGAATCGAAGCAGGCCTGAAGCCTAGGTGAGGTTTCAGGA
5121 GTCCAGCCCCAGGAGGCAAAGTCACCAATGCAGGGAGGTAATGCCTTTTGGCAGGAAAACCAATAGAGTTGGTTGGGTG
5201 GGGAGTCAGGGGTGGGAGGAGAAGGAGGAAGGAGGAAAGGCCAGACTGGCCTGCCCTTTCTCCATACTTCACCCAGC
5281 AGAGGTTTCATGGGACACAGTTGGAAAGCCACTGGGAGGAAATGCCTCACTACAGGGGGCCCTCTGTAGCAAGCCCAGCC
5361 GGTAATCCTCCTAATGAACCCACAAGGTCAATTCACAACCTGATATCTTAGCTATTAAAGAAGTACTGACTTTACCARAAG
5441 AATCATCAAGAAAGCTATTTATATAAAACCCCTCAGTCATTTTGAAATAAAATTAATTTTAC

Fig. 9 (continued)

TRANSLATED PROTEIN - NUCLEOTIDE 124 TO 1089

1 CTTTGCTTCAGCCGAGTCGCCACTGGCTGCCTGAGGTGCTCTTA
46 CAGCCTGTTCCAAGTGTGGCTTAATCCGTCTCCACCACCAGATCT

91 TTCTCCGTGGATTCTCTGCTAAGACCGCTGCCATGCCAGTGACG
MetProValThr

136 GTAACCCGCACCACCATCACAACCACCACGACGTCATCTTCGGGC
ValThrArgThrThrIleThrThrThrThrThrSerSerSerGly

181 CTGGGGTCCCCCATGATCGTGGGGTCCCCTCGGGCCCTGACACAG
LeuGlySerProMetIleValGlySerProArgAlaLeuThrGln

226 CCCCTGGGTCTCCTTCGCCTGCTGCAGCTGGTGTCTACCTGCGTG
ProLeuGlyLeuLeuArgLeuLeuGlnLeuValSerThrCysVal

271 GCCTTCTCGCTGGTGGCTAGCGTGGGCGCCTGGACGGGGTCCATG
AlaPheSerLeuValAlaSerValGlyAlaTrpThrGlySerMet

316 GGCAACTGGTCCATGTTACCTGGTGCTTCTGCTTCTCCGTGACC
GlyAsnTrpSerMetPheThrTrpCysPheCysPheSerValThr

361 CTGATCATCCTCATCGTGGAGCTGTGCGGGCTCCAGGCCCGCTTC
LeuIleIleLeuIleValGluLeuCysGlyLeuGlnAlaArgPhe

406 CCCCTGTCTTGGCGCAACTTCCCCATCACCTTCGCCTGCTATGCG
ProLeuSerTrpArgAsnPheProIleThrPheAlaCysTyrAla

451 GCCCTCTTCTGCCTCTCGGCCTCCATCATCTACCCACCACCTAT
AlaLeuPheCysLeuSerAlaSerIleIleTyrProThrThrTyr

496 GTCCAGTTCCTGTCCCACGGCCGTTTCGCGGGACCACGCCATCGCC
ValGlnPheLeuSerHisGlyArgSerArgAspHisAlaIleAla

541 GCCACCTTCTTCTCCTGCATCGCGTGTGTGGCTTACGCCACCGAA
AlaThrPhePheSerCysIleAlaCysValAlaTyrAlaThrGlu

586 GTGGCCTGGACCCGGGCCCCGGCCGCGAGATCACTGGCTATATG
ValAlaTrpThrArgAlaArgProGlyGluIleThrGlyTyrMet

631 GCCACCGTACCCGGGCTGCTGAAGGTGCTGGAGACCTTCGTTGCC
AlaThrValProGlyLeuLeuLysValLeuGluThrPheValAla

676 TGCATCATCTTCGCGTTCATCAGCGACCCCAACCTGTACCAGCAC
CysIleIlePheAlaPheIleSerAspProAsnLeuTyrGlnHis

Fig. 10

721 CAGCCGGCCCTGGAGTGGTGGTGGCGGTGTACGCCATCTGCTTC
GlnProAlaLeuGluTrpCysValAlaValTyrAlaIleCysPhe

766 ATCCTAGCGGCCATCGCCATCCTGCTGAACCTGGGGGAGTGCACC
IleLeuAlaAlaIleAlaIleLeuLeuAsnLeuGlyGluCysThr

811 AACGTGCTACCCATCCCCTTCCCCAGCTTCCTGTCGGGGCTGGCC
AsnValLeuProIleProPheProSerPheLeuSerGlyLeuAla

856 TTGCTGTCTGTCTCCTCTATGCCACCGCCCTTGTTCTCTGGCCC
LeuLeuSerValLeuLeuTyrAlaThrAlaLeuValLeuTrpPro

901 CTCTACCAGTTTCGATGAGAAGTATGGCGGCCAGCCTCGGCGCTCG
LeuTyrGlnPheAspGluLysTyrGlyGlyGlnProArgArgSer

946 AGAGATGTAAGCTGCAGCCGCAGCCATGCCTACTACGTGTGTGCC
ArgAspValSerCysSerArgSerHisAlaTyrTyrValCysAla

991 TGGGACCGCCGACTGGCTGTGGCCATCCTGACGGCCATCAACCTA
TrpAspArgArgLeuAlaValAlaIleLeuThrAlaIleAsnLeu

1036 CTGGCGTATGTGGCTGACCTGGTGCACCTCTGCCCACCTGGTTTTT
LeuAlaTyrValAlaAspLeuValHisSerAlaHisLeuValPhe

1081 GTCAAGGTCTAAGACTCTCCCAAGAGGCTCCCGTTCCCTCTCCAA
ValLysVal

1126 CCTCTTTGTTCTTCTTGCCCGAGTTTTCTTTATGGAGTACTTCTT

1171 TCCTCCGCCTTTCCTCTGTTTTCTCTTCCTGTCTCCC

Fig. 10 (continued)

TRANSLATED PROTEIN - NUCLEOTIDE 587 TO 1012

1 GGAAGAAGAAGGAGGAGGAGGAGAAGGAGAAGAAGAAGGAGAAGA
 46 ACGCAAGACTTCGTCTCAAAAAAAAAAGAAGAAAAATTTAAATAC
 91 ATTTAAAAAGAAGGTTGCATGCTGTGGAGCAACCAGACAATTGT
 136 GATGAAATGTGAAGCACAAGGCACCAGCTGTGACGTGTTTTTGCC
 181 AAGAAGTCAAACCACGTTCCAATAAACCTCTAGAGCAAACCTTC
 226 ATTTTCAGCAAATTCGAAGAAAAGAGGAATAATGTAAATGACCCC
 271 ACAGGGAAACAGACAAACCCTGAATGTGGAGCATTTCACAGGACA
 316 AAACCTGGACAGACATCGGAACACTTACAGGATGTGTGTAGTGTG
 361 GCATGACAGAGAACTTTGGTTTCCTTTAATGTGACTGTAGACCTG
 406 GCAGTGTTACTATAAGAATCACTGGCAATCAGACACCCGGGTGTG
 451 CTGAGCTGGCACTCAGTGGGGCGGCTACTGCTCATGTGATTGTG
 496 GAGTAGACAGTTGGAAGAAGTACCCAGTCCATTTGGAGAGTTAAA
 541 ACTGTGCCAACAGAGGTGTCCTCTGACTTTTCTTCTGCAAGCTC

 586 CATGTTTTTCACATCTTCCCTTTGACTGTGTCCTGCTGCTGCTGCT
 MetPheSerHisLeuProPheAspCysValLeuLeuLeuLeuLe

 631 GCTACTACTTACAAGGTCCTCAGAAAGTGAATACAGAGCGGAGGT
 uLeuLeuLeuThrArgSerSerGluValGluTyrArgAlaGluVa

 676 CGGTCAGAATGCCTATCTGCCCTGCTTCTACACCCAGCCGCCCC
 lGlyGlnAsnAlaTyrLeuProCysPheTyrThrProAlaAlaPr

 721 AGGGAACCTCGTGCCCGTCTGCTGGGGCAAAGGAGCCTGTCCTGT
 oGlyAsnLeuValProValCysTrpGlyLysGlyAlaCysProVa

 766 GTTTGAATGTGGCAACGTGGTGCTCAGGACTGATGAAAGGGATGT
 lPheGluCysGlyAsnValValLeuArgThrAspGluArgAspVa

 811 GAATTATTGGACATCCAGATACTGGCTAAATGGGGATTTCCGCAA
 lAsnTyrTrpThrSerArgTyrTrpLeuAsnGlyAspPheArgLy

 856 AGGAGATGTGTCCCTGACCATAGAGAATGTGACTCTAGCAGACAG
 sGlyAspValSerLeuThrIleGluAsnValThrLeuAlaAspSe

 901 TGGGATCTACTGCTGCCGGATCCAAATCCCAGGCATAATGAATGA
 rGlyIleTyrCysCysArgIleGlnIleProGlyIleMetAsnAs

 946 TGAAAAATTTAACCTGAAGTTGGTCATCAAACCAGGTGAGTGGAC
 pGluLysPheAsnLeuLysLeuValIleLysProGlyGluTrpTh

 991 ATTTGCATGCCATCTTTATGAATAAGATTTATCTGTGGATCATAT
 rPheAlaCysHisLeuTyrGlu

 1036 TAAAGGTACTGATTGTTCTCATCTCTGACTTCCCTAATTATAGCC
 1081 CTGGAGGAGGGCCACTAAGACCTAAAGTTTAACAGGCCCCATTGG
 1126 TGATGCTCAGTGATATTTAACACCTTCTCTCTGTTTAAACTCA
 1171 TGGGTGTGCTGGGCGTGGTGGCTCACACCTCT

Fig. 11

TRANSLATED PROTEIN - NUCLEOTIDE 494 TO 769

1 TCTAGAACATTCTCCAGCCCTTTTTTCTTTTGCTCTTTTATGAC
46 ATTGACATGAAGAGTCCGGGCCAGTTGTTCTGGATTGTCTGATT
91 GCTTCTCCCTGGTTGGAGTCAGGTGGAACAGCTCTGGCAGGAACG
136 CCCCCCGGGCAATGCAGAGTCTCCTCCAGGAGGCACTTAGTGT
181 CCATGCGTCACCTTGCTGGTGATGCTTCACTGGATCACTTGGTTC
226 CGGGGTGTCCGCACGTCTCCCTGTAGTGCAGGTGCTCCTTCCTC
271 TTTCCAATTAGCCTGTGGGATGGGACTTGAAGCTGTGTCTGTTC
316 TGCTCCACTGGCAACCTTTTCTTCAATGACTTAAGCTGGTGTTC
361 GCCATTTTCCATACTCTATCATGGGGAGTGTTCAAGTATCGGCATC
406 TAGAGATCTCCCCTGGCCCCATCACAGCTAGAGCTATGCTGTCCC

451 CTTTCAGGGACATCTTGTAATTTATCCACCCAGCCCCCAACTGAT
Me

496 GGACATAAAGGCTGTCTCCCCATCATCTCCTGCTACTACAGACAG
tAspIleLysAlaValSerProSerSerProAlaThrThrAspSe

541 CACTGCAGGGACTGTCCTGCTGTGTTTTTTTAAGGCATGGGTACT
rThrAlaGlyThrValLeuLeuCysPhePheLysAlaTrpValLe

586 CCAGAAGCAGTTGCTCAGCTGCACCCCCAAGGTTGAGTGGAAGTC
uGlnLysGlnLeuLeuSerCysThrProLysValGluTrpLysSe

631 CCTCGGTAAAGGAGGAGGAGAGAGTGTGAAGGGAATGGCAAGGCG
rLeuGlyLysGlyGlyGlyGluSerValLysGlyMetAlaArgAr

676 GGGAGGGAGACAGGGCACAGGTGTCTGGCAACAGCAGATGGGAA
gGlyGlyArgGlnGlyThrGlyValLeuAlaThrAlaAspGlyLy

721 ACAGGTCTGGCTAAGGTACCAGAAGCCAACAAGTCCCAGAAAGGT
sGlnValTrpLeuArgTyrGlnLysProThrSerProArgLysVa

766 CAAGTGACTTTCCCAAGGTCACACAGCAAGTTGATGGCAGAGCTG
lLys

811 GGTACAGGACTCAGA

Fig. 12

TRANSLATED PROTEIN - NUCLEOTIDE 83 TO 889

1 CTAGAAATTCAGCGCCGCTGAATTCTAGTGCAGAGTGAGCAAGGG
 46 CCGCCTCATCCAGCTTCTCTCTGAGAGCCAGGGCCACATGGCTCA
 MetAlaHi
 91 CCTGGTGAACTCCGTCAGCGACATCCTGGATGCCCTGCAGAGGGA
 sLeuValAsnSerValSerAspIleLeuAspAlaLeuGlnArgAs
 136 CCGGGGGCTGGGCCGGCCCCGCAACAAGGCCGACCTTCAGAGAGC
 pArgGlyLeuGlyArgProArgAsnLysAlaAspLeuGlnArgAl
 181 GCCTGCCCCGGGGAACCCGGCCCCGGGGCTGTGCCACTGGCTCCCC
 aProAlaArgGlyThrArgProArgGlyCysAlaThrGlySerAr
 226 GCCCCGAGACTGTCTGGACGTCCTCCTAAGCGGACAGCAGGACGA
 gProArgAspCysLeuAspValLeuLeuSerGlyGlnGlnAspAs
 271 TGGCGTCTACTCTGTCTTTCCCAACCACTACCCGGCCGGCTTCCA
 pGlyValTyrSerValPheProThrHisTyrProAlaGlyPheGl
 316 GGTGTACTGTGACATGCGCACGGACGGCGGCGGCTGGACGGTGTT
 nValTyrCysAspMetArgThrAspGlyGlyGlyTrpThrValPh
 361 TCAGCGCCGGGAGGACGGCTCCGTGAACTTCTTCCGGGGCTGGGA
 eGlnArgArgGluAspGlySerValAsnPhePheArgGlyTrpAs
 406 TGCGTACCGAGACGGCTTTGGCAGGCTCACCGGGGAGCACTGGCT
 pAlaTyrArgAspGlyPheGlyArgLeuThrGlyGluHisTrpLe
 451 AGGGCTCAAGAGGATCCACGCCCTGACCACACAGGCTGCCTACGA
 uGlyLeuLysArgIleHisAlaLeuThrThrGlnAlaAlaTyrGl
 496 GCTGCACGTGGACCTGGAGGACTTTGAGAATGGCACGGCCTATGC
 uLeuHisValAspLeuGluAspPheGluAsnGlyThrAlaTyrAl
 541 CCGCTACGGGAGCTTCGGCGTGGGCTTGTTCTCCGTGGACCCTGA
 aArgTyrGlySerPheGlyValGlyLeuPheSerValAspProGl
 586 GGAAGACGGGTACCCGCTCACCGTGGCTGACTATTCCGGCACTGC
 uGluAspGlyTyrProLeuThrValAlaAspTyrSerGlyThrAl
 631 AGGCGACTCCCTCCTGAAGCACAGCGGCATGAGGTTCCACCACAA
 aGlyAspSerLeuLeuLysHisSerGlyMetArgPheThrThrLy
 676 GGACCGTGACAGCGACCATTCAGAGAACAACGTGCCGCCTTCTA
 sAspArgAspSerAspHisSerGluAsnAsnCysAlaAlaPheTy

Fig. 13

721 CCGCGGTGCCTGGTGGTACCGCAACTGCCACACGTCCAACCTCAA
rArgGlyAlaTrpTrpTyrArgAsnCysHisThrSerAsnLeuAs
766 TGGGCAGTACCTGCGCGGTGCGCACGCCTCCTATGCCGACGGCGT
nGlyGlnTyrLeuArgGlyAlaHisAlaSerTyrAlaAspGlyVa
811 GGAGTGGTCCTCCTGGACCGGCTGGCAGTACTCACTCAAGTTCTC
lGluTrpSerSerTrpThrGlyTrpGlnTyrSerLeuLysPheSe
856 TGAGATGAAGATCCGGCCGGTCCGGGAGGACCGCTAGACCGGTGC
rGluMetLysIleArgProValArgGluAspArg
901 ACCTTGTCCTTGGCCCTGCTGGTCCCTGTCGCCCCATCCCCGACC
946 CCACCTCACTCTTTCGTGAATGTTCTCCACCCACCTGTGCCTGGC
991 GGACCCACTCTCCAGTAGGGAGGGGCCGGGCCATCCCTGACACGA
1036 AGCTCCCTGGGCCGGTGAAGTCACACATCGCCTTCTCGCCGTCCC
1081 CACCCCCTCCATTTGGCAG

Fig. 13 (continued)

TRANSLATED PROTEIN - FRAME: 2 - NUCLEOTIDE 38 TO 844

1
 CCGCCTCATCCAGCTTCTCTCTGAGAGCCAGGGCCACATGGCTCA
 MetAlaHi
 46
 CCTGGTGAACCTCCGTCAGCGACATCCTGGATGCCCTGCAGAGGGA
 sLeuValAsnSerValSerAspIleLeuAspAlaLeuGlnArgAs
 91
 CCGGGGGCTGGGCCGGCCCCGCAACAAGGCCGACCTTCAGAGAGC
 pArgGlyLeuGlyArgProArgAsnLysAlaAspLeuGlnArgAl
 136
 GCCTGCCCCGGGGAACCCGGCCCCGGGGCTGTGCCACTGGCTCCCG
 aProAlaArgGlyThrArgProArgGlyCysAlaThrGlySerAr
 181
 GCCCCGAGACTGTCTGGACGTCCTCCTAAGCGGACAGCAGGACGA
 gProArgAspCysLeuAspValLeuLeuSerGlyGlnGlnAspAs
 226
 TGGCGTCTACTCTGTCTTTCCACCCACTACCCGGCCGGCTTCCA
 pGlyValTyrSerValPheProThrHisTyrProAlaGlyPheGl
 271
 GGTGTACTGTGACATGCGCACGGACGGCGGCGGCTGGACGGTGTT
 nValTyrCysAspMetArgThrAspGlyGlyGlyTrpThrValPh
 316
 TCAGCGCCGGGAGGACGGCTCCGTGAACTTCTTCCGGGGCTGGGA
 eGlnArgArgGluAspGlySerValAsnPhePheArgGlyTrpAs
 361
 TGGCTACCGAGACGGCTTTGGCAGGCTCACCGGGGAGCACTGGCT
 pAlaTyrArgAspGlyPheGlyArgLeuThrGlyGluHisTrpLe
 406
 AGGGCTCAAGAGGATCCACGCCCTGACCACACAGGCTGCCTACGA
 uGlyLeuLysArgIleHisAlaLeuThrThrGlnAlaAlaTyrGl
 451
 GCTGCACGTGGACCTGGAGGACTTTGAGAATGGCACGGCCTATGC
 uLeuHisValAspLeuGluAspPheGluAsnGlyThrAlaTyrAl
 496
 CCGCTACGGGAGCTTCGGCGTGGGCTTGTTCCCGTGGACCCTGA
 aArgTyrGlySerPheGlyValGlyLeuPheAlaValAspProGl
 541
 GGAAGACGGGCACCCGCTCACCGTGGCTGACTATTCCGGCACTGC
 uGluAspGlyHisProLeuThrValAlaAspTyrSerGlyThrAl
 586
 AGGCGACTCCCTCCTGAAGCACAGCGGCATGAGGTTCACCACCAA
 aGlyAspSerLeuLeuLysHisSerGlyMetArgPheThrThrLy
 631
 GGACCGTGACAGCGACCATTGAGAGAACAACCTGTGCCGCCTTCTA
 sAspArgAspSerAspHisSerGluAsnAsnCysAlaAlaPheTy

Fig. 14

676
CCGCGGTGCCTGGTGGTACCGCAACTGCCACACGTCCAACCTCAA
rArgGlyAlaTrpTrpTyrArgAsnCysHisThrSerAsnLeuAs
721
TGGGCAGTACCTGCGCGGTGCGCACGCCTCCTATGCCGACGGCGT
nGlyGlnTyrLeuArgGlyAlaHisAlaSerTyrAlaAspGlyVa
766
GGAGTGGTCCTCCTGGACCGGCTGGCAGTACTCACTCAAGTTCTC
lGluTrpSerSerTrpThrGlyTrpGlnTyrSerLeuLysPheSe
811
TGAGATGAAGATCCGCGCGGTCCGGGAGGACCGCTAGACCGGTGC
rGluMetLysIleArgProValArgGluAspArg
856
ACCTTGTCCTTGGCCCTGCTGGTCCCTGTCGCCCCATCCCCGACC
901
CCACCTCACTCTTTCGTGAATGTTCTCCACCCACCTGTGCCTGGC
946
GGACCCACTCTCCAGTAGGGAGGGGCCGGGCCATCCCTGACACGA
991
AGCTCCCTGGGCCCGGTGAAGTCACACATCGCCTTCTCGCCGTCCC
1036
CACCCCCTCCATTTGGCAG

Fig. 14 (continued)

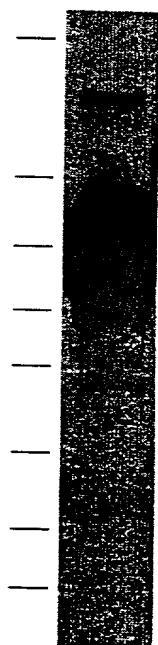


Fig. 15

28/42



Fig. 16



Fig. 17

FRAME: 1 - NUCLEOTIDE 1 TO 498

1
ATGAATTTTCTGAAATTAATTGCTGTGTTTATAGTTTTTAGCCAT
MetAsnPheLeuLysLeuIleAlaValPheIleValPheSerHis
46
GCATCGGAATCACCTCAGGACTCCACTCCCAATCAATTATATATC
AlaSerGluSerProGlnAspSerThrProAsnGlnLeuTyrIle
91
TGGGGGAGGACCAAGGCGTTGGTATTTTTCAGAAGCTCCACTGGT
TrpGlyArgThrLysAlaLeuValPhePheArgSerSerThrGly
136
GATTCTGACAGCACAGCTAGGATTAAGAACTGATCAATGGGAAC
AspSerAspSerThrAlaArgIleLysLysLeuIleAsnGlyAsn
181
AGCATGCCTGTTGCAGAGGAGCTTCCCTGGGAAATGTCACACACA
SerMetProValAlaGluGluLeuProTrpGluMetSerHisThr
226
GAACATCAATCTTCCTTCCCCACTCCTGAGATCCCTCATTCTTTG
GluHisGlnSerSerPheProThrProGluIleProHisSerLeu
271
GCACCAGGAACAGTTGCAATTAGTAAACCCTGGTTCCCTGCTGTC
AlaProGlyThrValAlaIleSerLysProTrpPheProAlaVal
316
TCACAAATCGCAAGAGTCCAACGTGTGGATATAAACTTTTGTTC
SerGlnIleAlaArgValGlnArgValAspIleAsnPheCysSer
361
TGGGAGGATCTTCTCCCAGTGGAAAAGCAACTGGGAAAAGCAGG
TrpGluAspLeuSerProSerGlyLysAlaThrGlyLysSerArg
406
ACACACTGCACAGTGACTGCAGTTTCATCCAATGCCACCACCCAT
ThrHisCysThrValThrAlaValSerSerAsnAlaThrThrHis
451
GCAGGCATAAATAATGAACATGGATGGGGGAGTCTGGAGCTGCTG
AlaGlyIleAsnAsnGluHisGlyTrpGlySerLeuGluLeuLeu
496
AAT
Asn

Fig. 18

CAGAGAGCGCCTGCCCCGGGAACCCGGCCCCGGGGCTGTGCCACTGGCTCCCGGCCCGAGACTGTCTGGACGTCCT
CCTAAGCGGACAGCAGGACGATGGCGTCTACTCTGTCTTTCCACCCACTACCCGGCCGGCTTCAGGTGTACTGTG
ACATGCGCACGGACGGCGGGCTGGACGGTGTTCAGCGCCGGGAGGACGGCTCCGTGAATTCTTCCGGGGCTGG
GACGCGTACCGAGACGGCTTTGGCAGGCTCACCGGGGAGCACTGGCTAGGGCTCAAGAGGATCCACGCCCTGACCAC
ACAGGCTGCCTACGAGCTGCACGTGGACCTGGAGGACTTTGAGAATGGCACGGCCTATGCCCCGTACGGGAGCTTCG
GCGTGGGCTTGTTCGCGGTGGACCTGAGGAAGACGGGTACCCGCTCACCGTGGCTGACTATTCGGGCACTGCAGGC
GACTCCCTCCTGAAGCACAGCGGCATGAGGTTACCACCAAGGACCGTGACAGCGACCATTGAGAGAACAACTGTGC
CGCCTTCTACCGCGGTGCCTGGTGGTACCGBAACTGCCACACGTCCAACCTCAATGGGCAGTACCTGCCGGGTGCGC
ACGCCTCCTATGCCGACGGCGTGGAGTGGTCTCCTGGACCGGCTGGCAGTACTCACTCAAGTTCTCTGAGATGAAG
ATCCGGCCGGTCCGG GAGGACCGC

Fig. 19

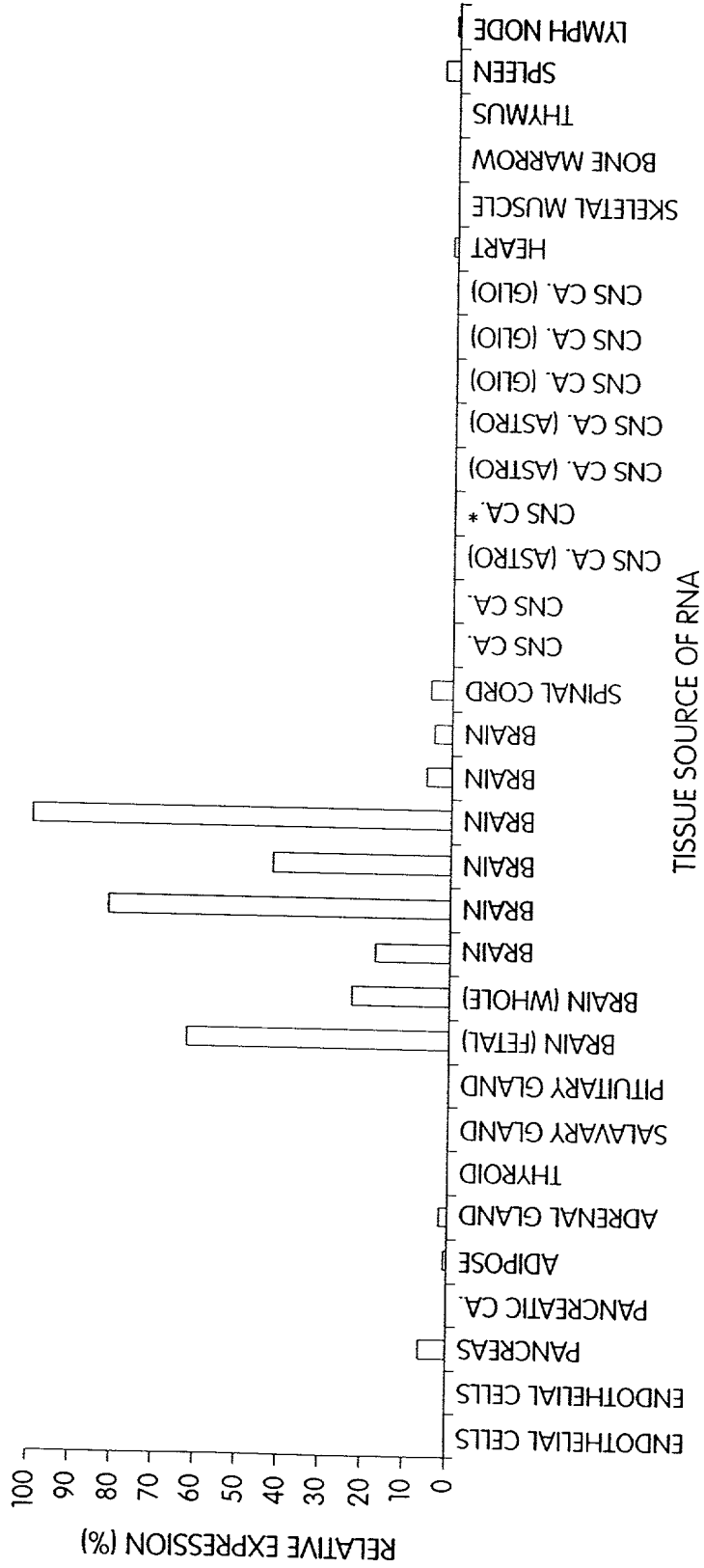


Fig. 20 (PANEL A)

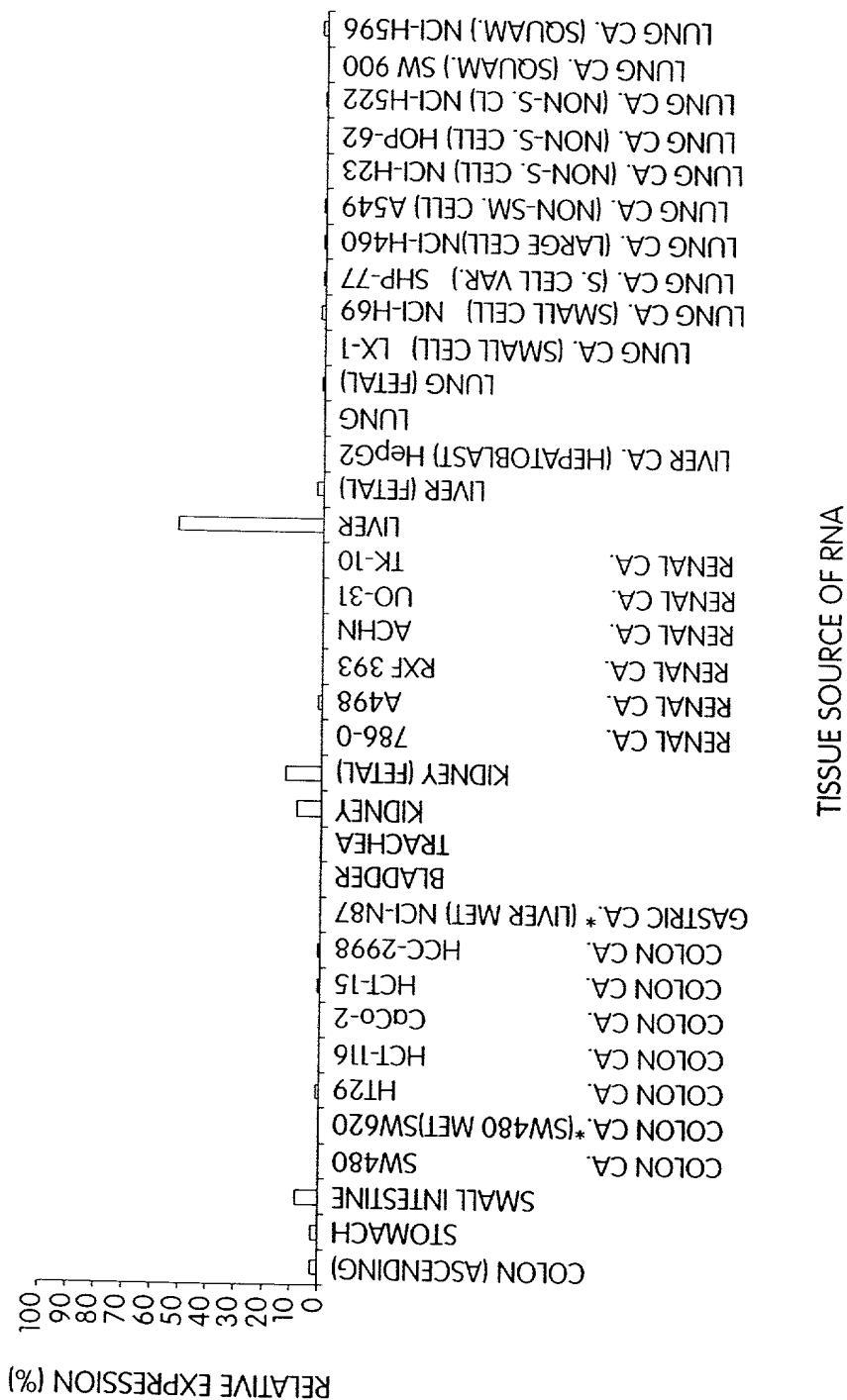


Fig. 20 (PANEL B)

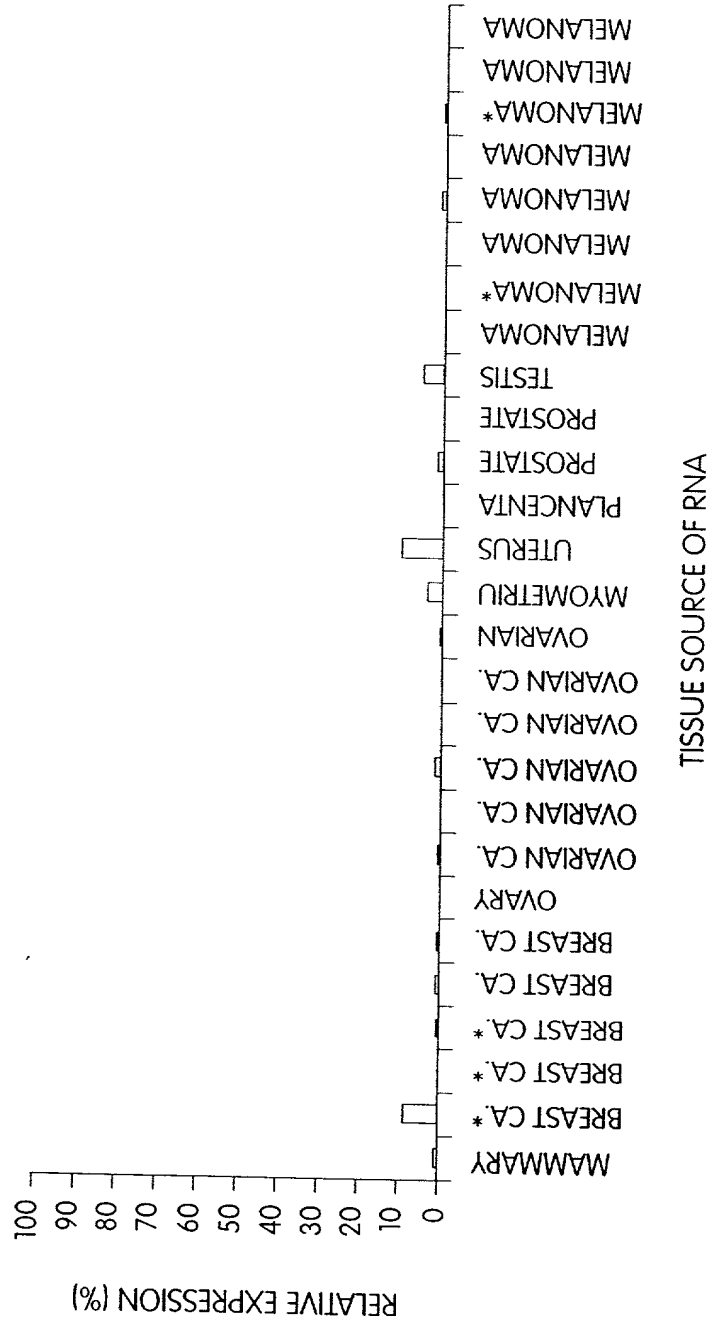
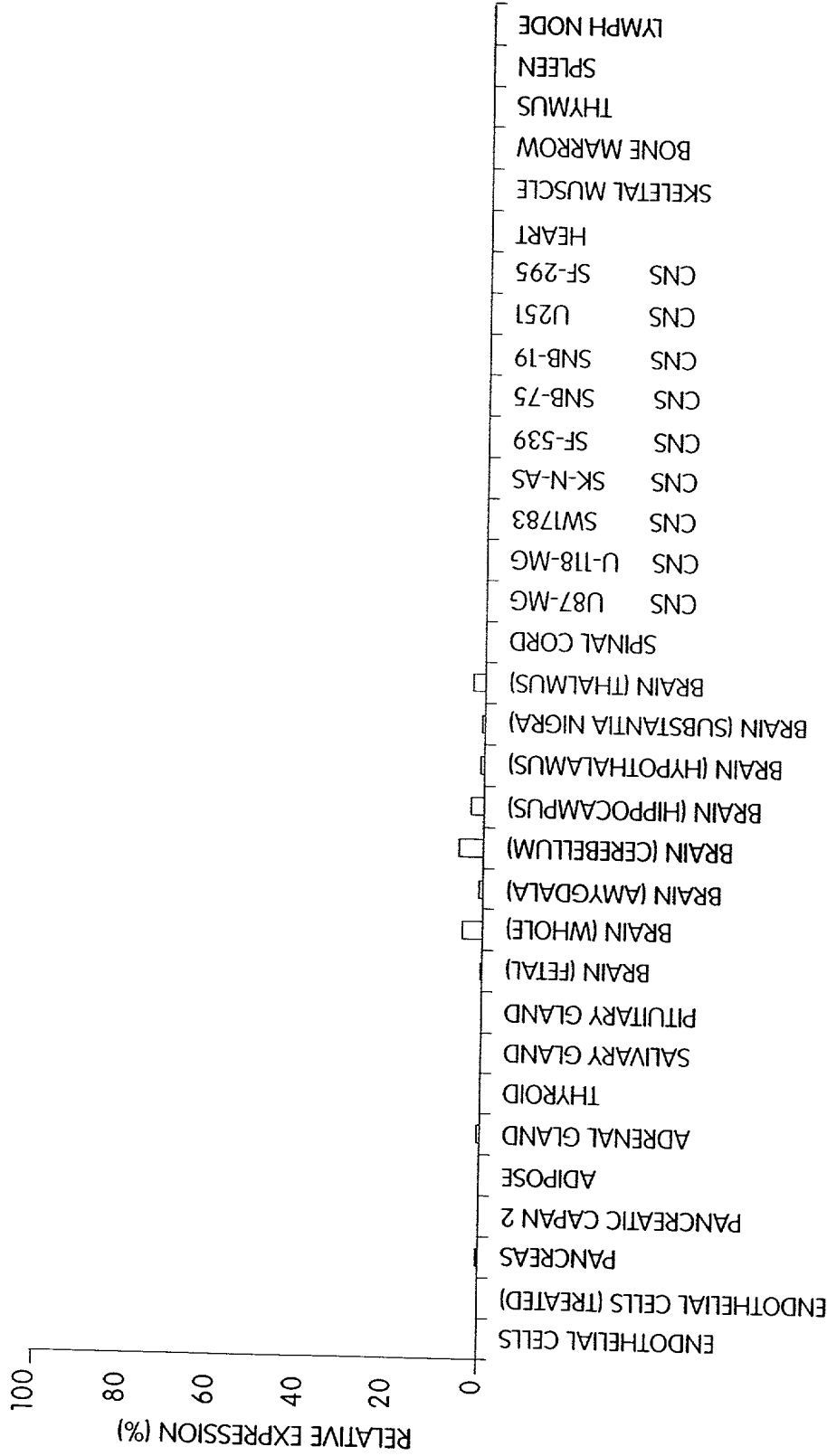


Fig. 20 (PANEL C)



TISSUE SOURCE OF RNA
Fig. 21 (PANEL A)

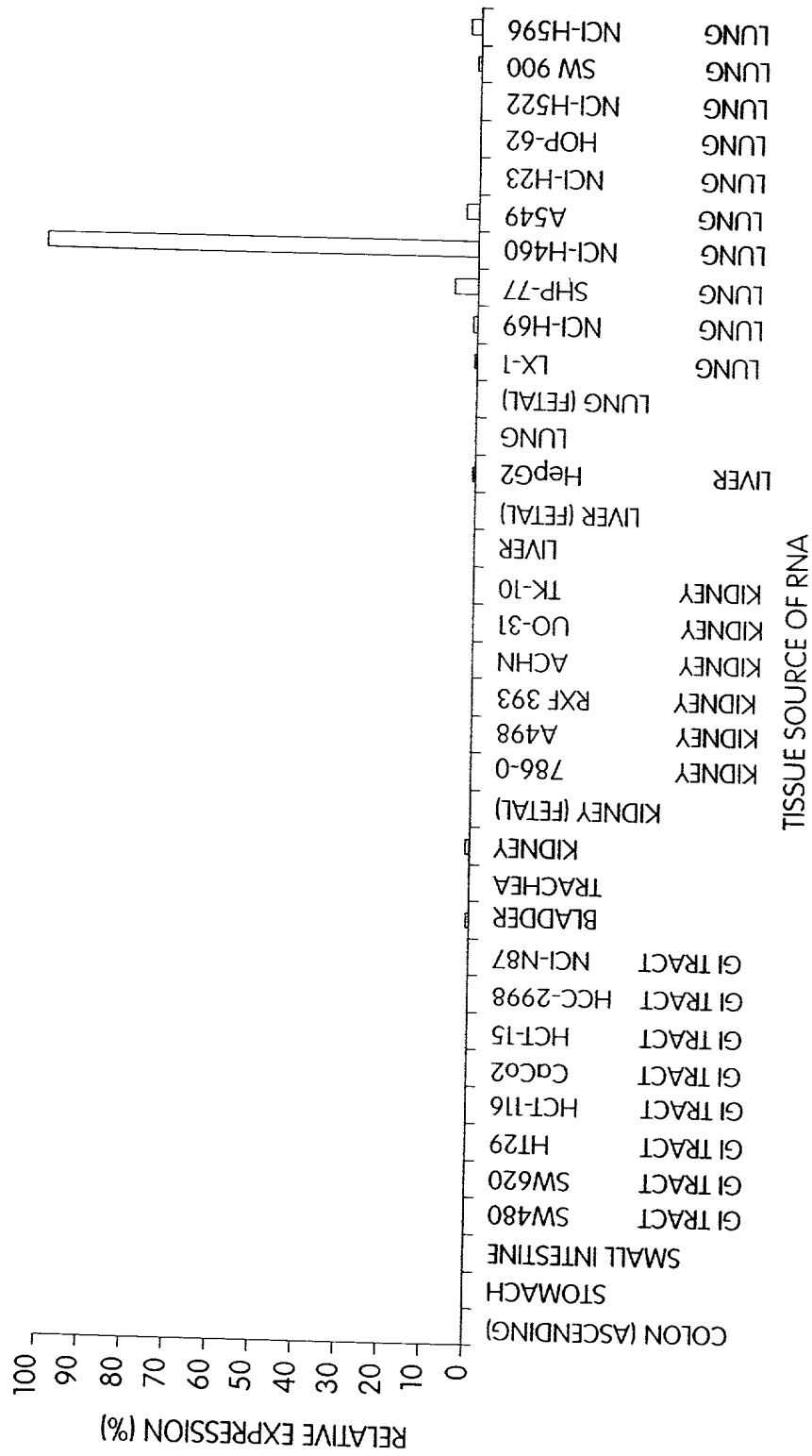
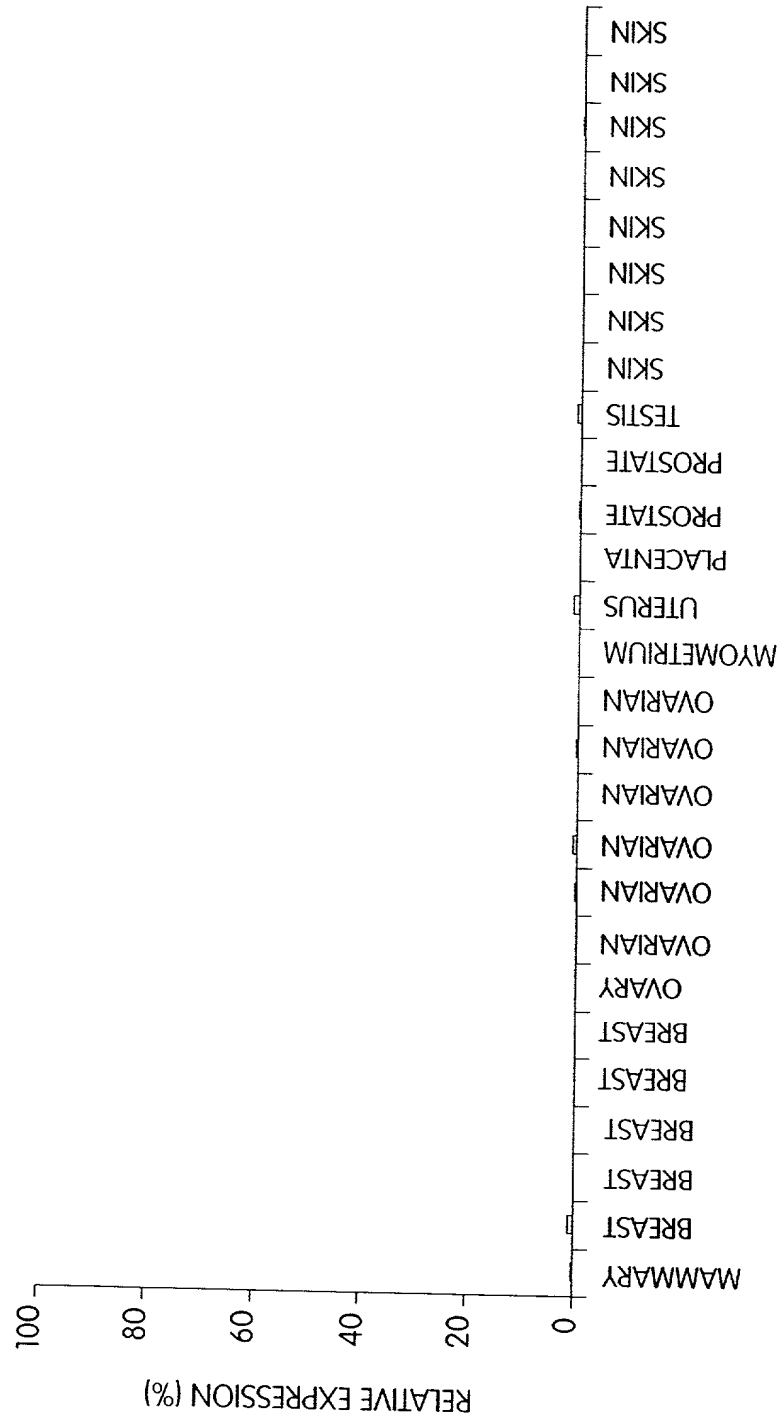
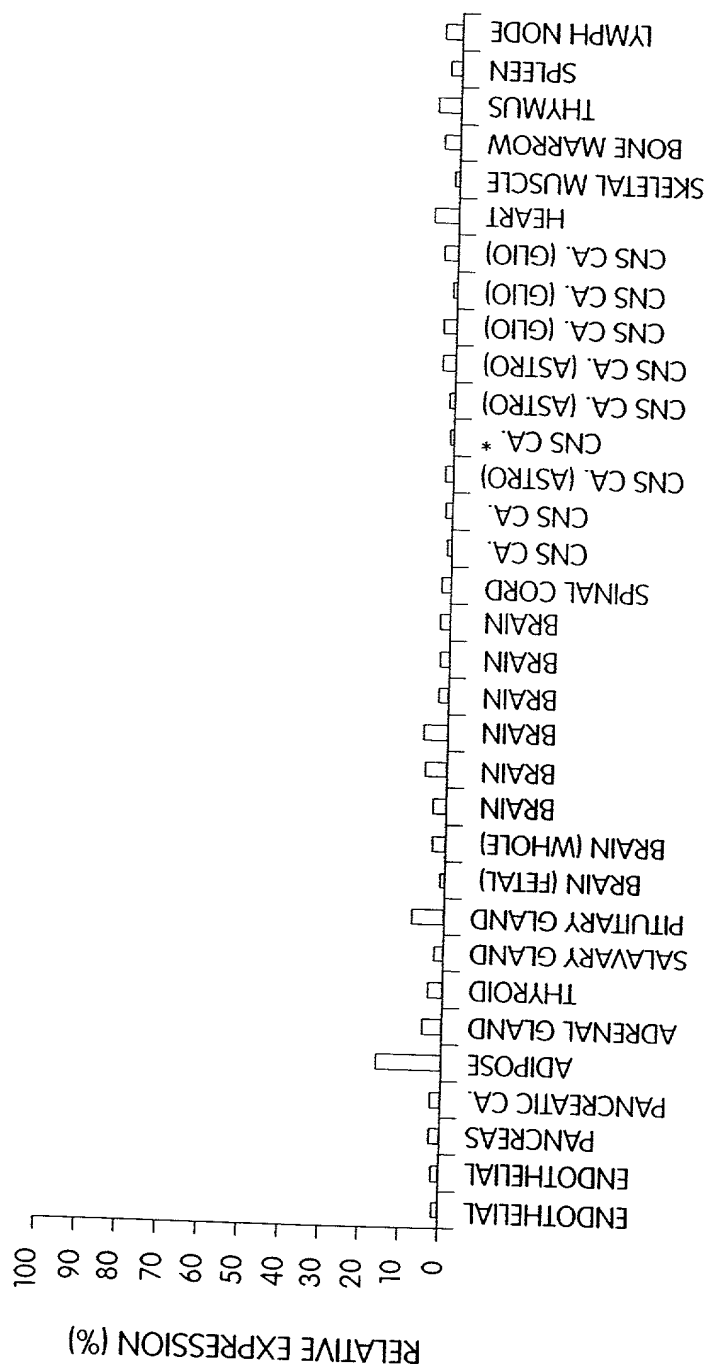


Fig. 21 (PANEL B)

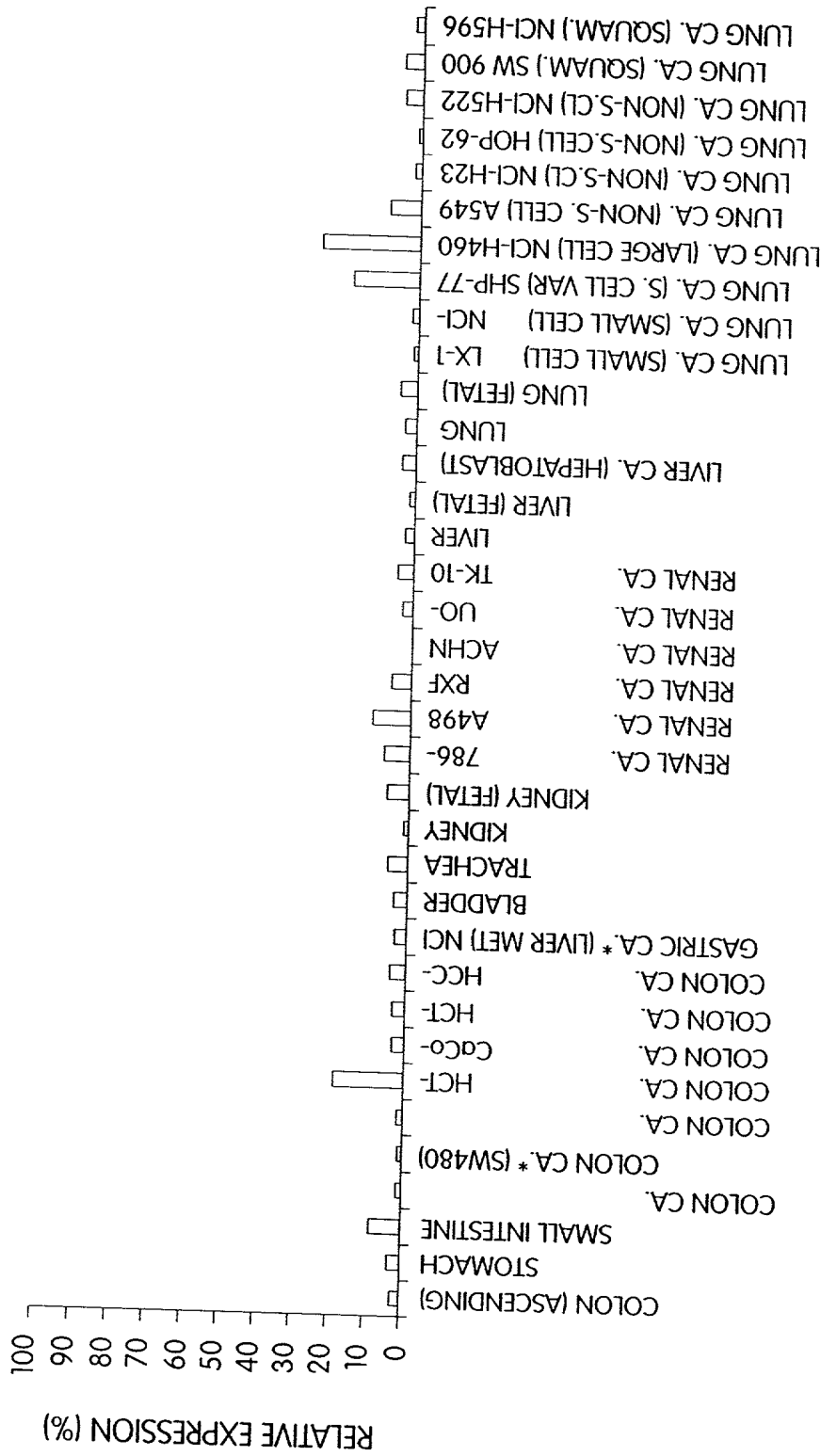


TISSUE SOURCE OF RNA
Fig. 21 (PANEL C)



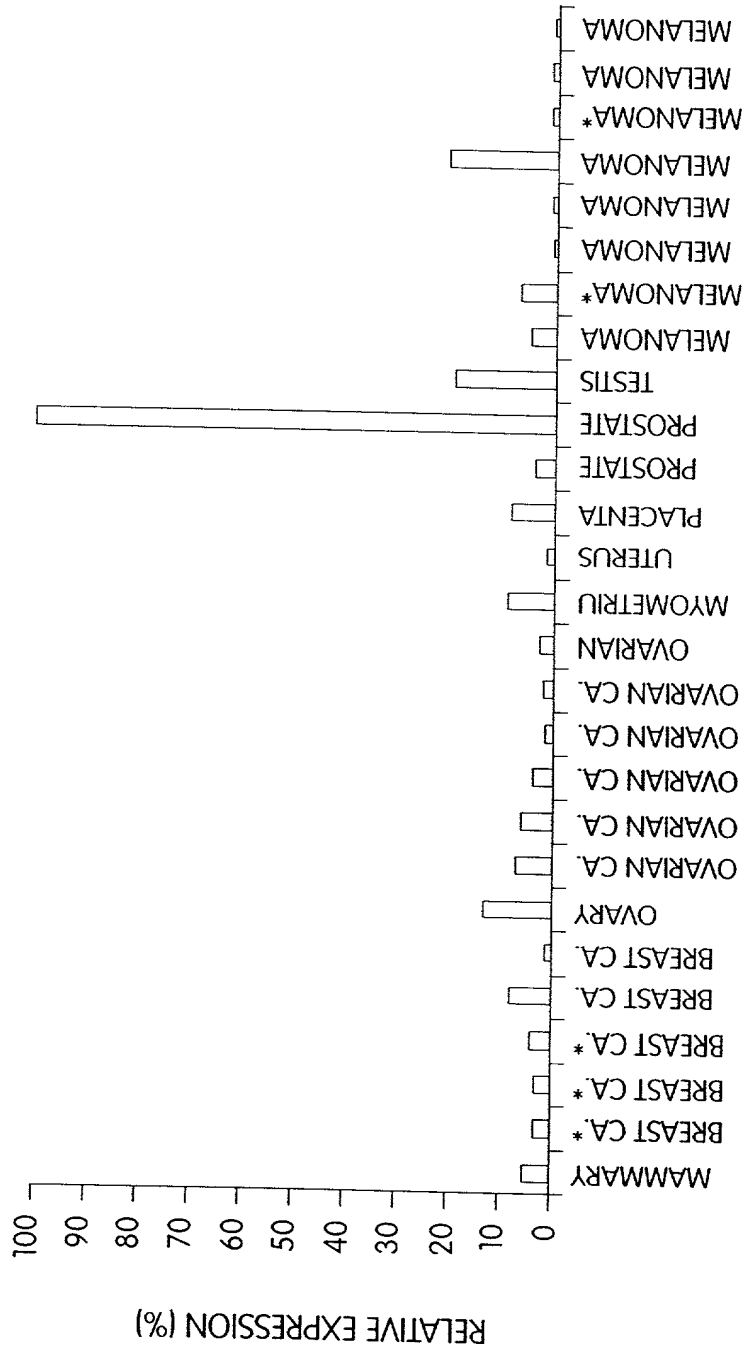
TISSUE SOURCE OF RNA

Fig. 22 (PANEL A)



TISSUE SOURCE OF RNA

Fig. 22 (PANEL B)



TISSUE SOURCE OF RNA

Fig. 22 (PANEL C)

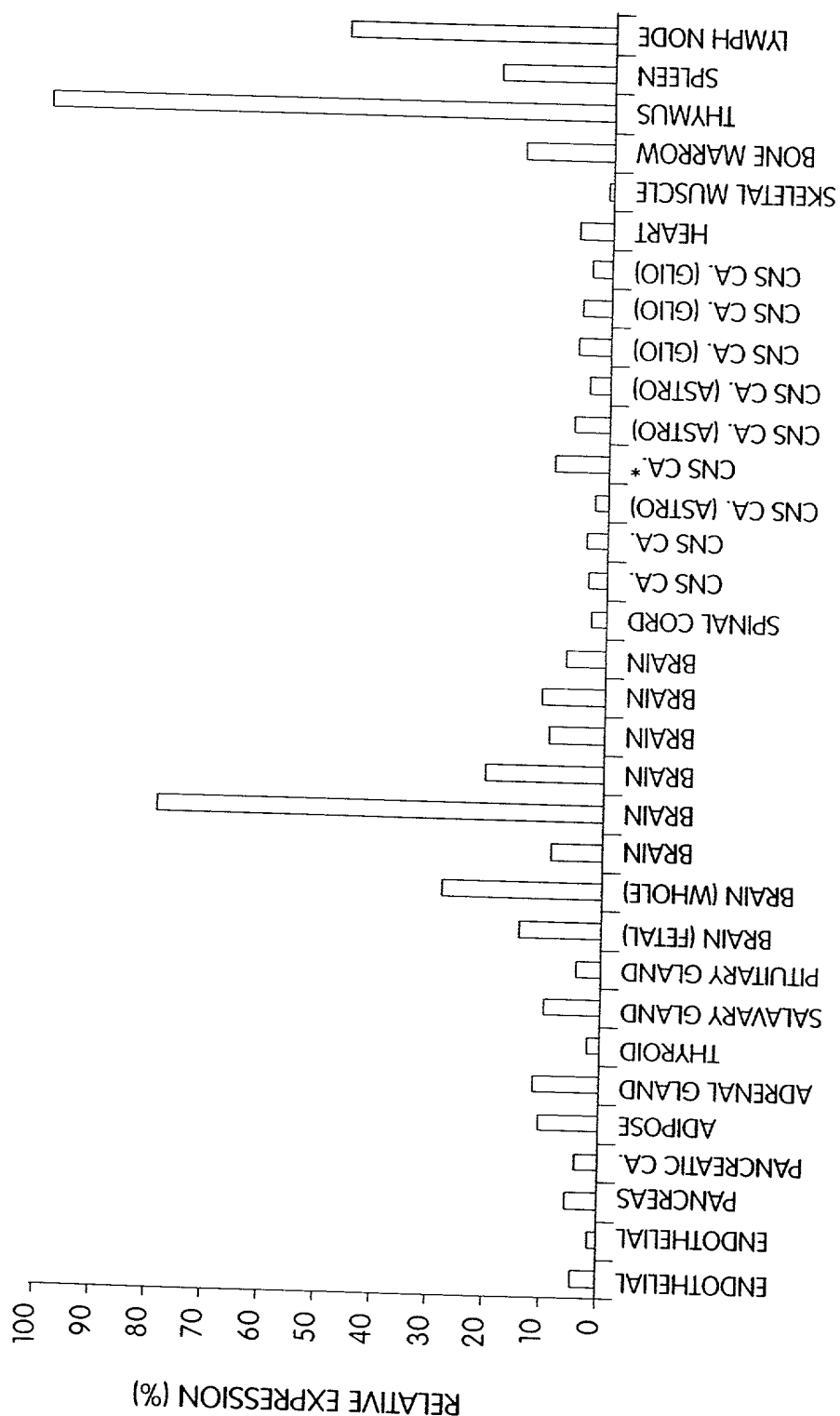
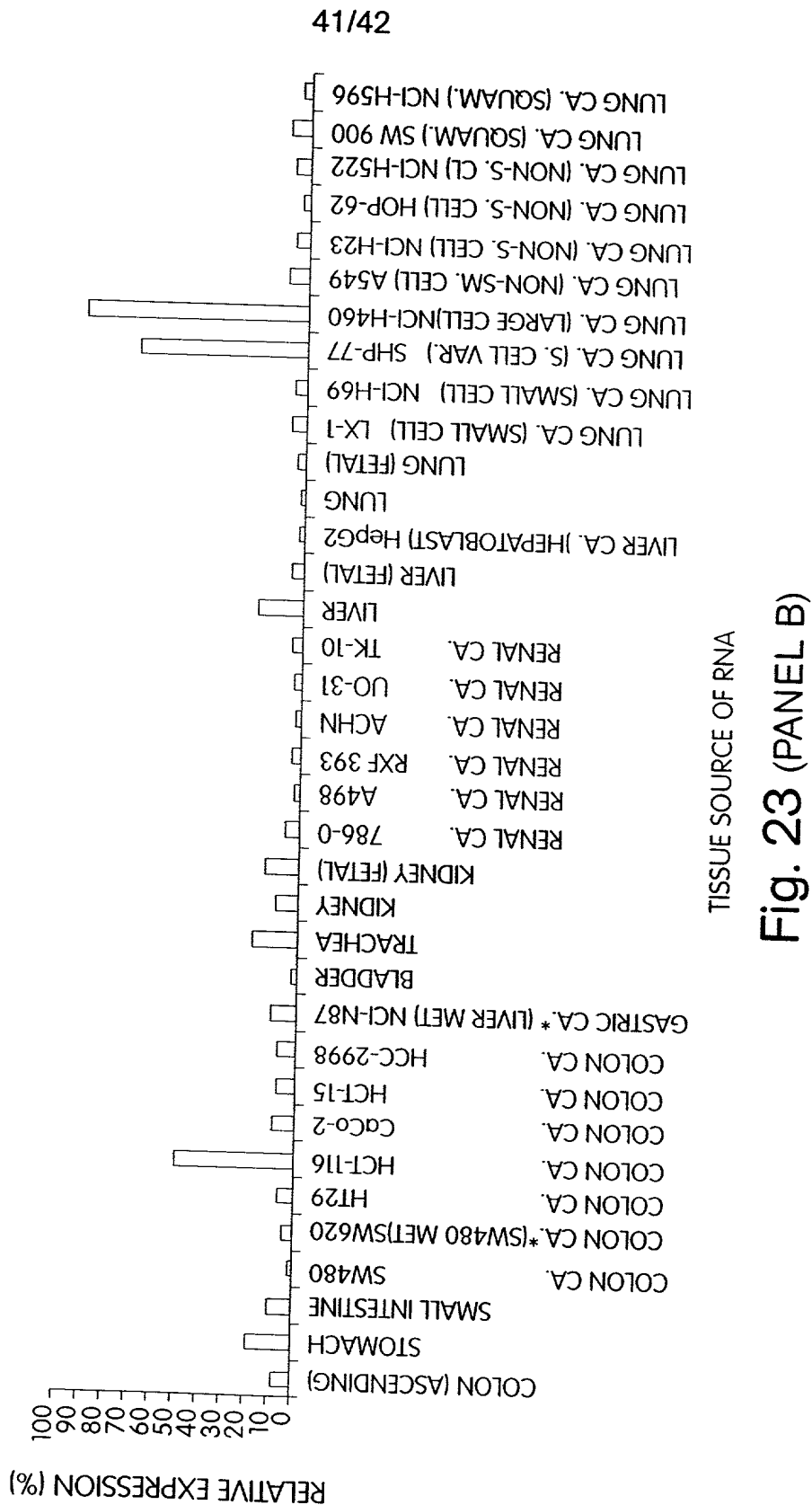
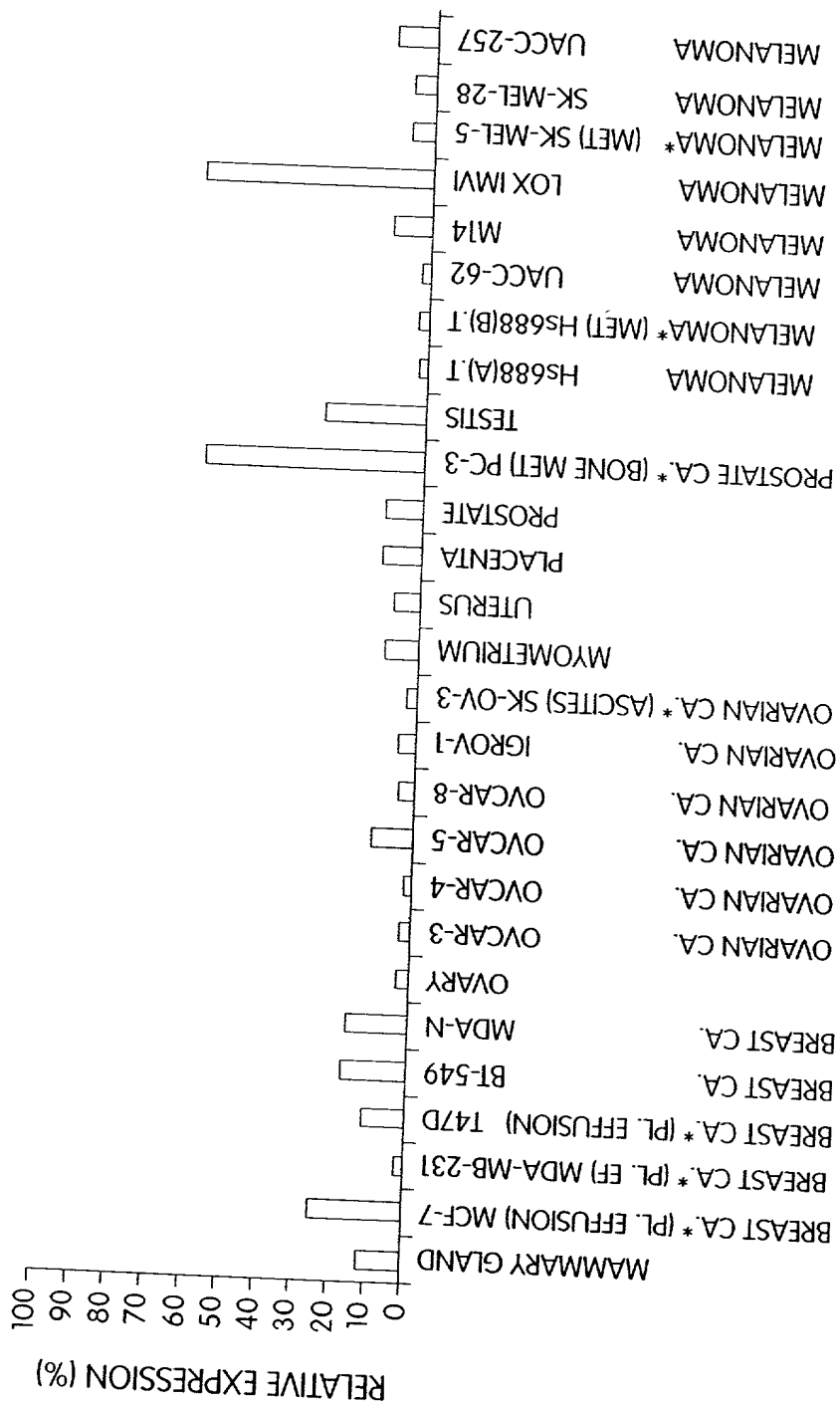


Fig. 23 (PANEL A)





TISSUE SOURCE OF RNA
Fig. 23 (PANEL C)